Emotion Recognition in Parents Attending Child and Adolescent Mental Health Services

Submitted by Katherine Donnelly, to the University of Exeter
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Table of Contents

List of Tables

Literature review

Empirical paper

List of Figures

Literature review

Empirical Paper

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LITERATURE REVIEW

Long-term outcomes of parent training for children's mental health: A systematic review

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Abstract

Objectives: This review aims to investigate whether parenting interventions lead to long-term positive outcomes for children's mental health. Theoretical models of attachment suggest that parental sensitivity is a defining element in the development of positive mental health, yet there have been few substantive reviews investigating effects of parent-training on children's internalising symptoms beyond an immediate post-training period. Methods: A systematic search identified 30 studies which directly addressed this question. These studies report on training for parents of 0-12 year-olds designed to promote the development of sensitivity or skill with addressing children's emotional or social needs. Studies were included if they reported outcomes directly pertaining to children's internalising symptoms at least 5 months post-intervention. Studies were categorised as low, moderate or high quality according to the degree of bias that had been controlled for in the study design. Results: 2 studies of high quality, 13 of moderate quality and 14 of low quality were included in the review. All significant positive results derived from low or moderate quality studies, and were outnumbered by studies reporting a no such effect. Conclusions: These results indicate relatively weak evidence supporting the claim that children's internalising symptoms decrease in relation to parenting interventions. The review suggests that an alternative parent-training approach may be needed to elicit lasting improvements in this area.

Keywords: Parenting, child mental health, internalising, family intervention

Introduction

Rationale

Clinical context.

Many authors have emphasised the importance of parenting for the successful development of children's mental health (Costello, Foley, & Angold, 2006; Egger & Angold, 2006; Sanders et al., 2008) – high quality parenting has been argued to be critical for children's development into self-sufficient, resourceful adults (Vimpani, Patton, & Hayes, 2002). Researchers have identified factors such as lack of a warm, positive relationship, insecure attachment, harsh, inflexible or inconsistent discipline practises, inadequate supervision or involvement and parental psychopathology such as depression as specific risks for children's development of behavioural and emotional problems (Berlin, Cassidy, & Appleyard, 2008; Bretherton & Mulholland, 1999; Coie, 1996; Loeber & Farrington, 1998; Pearce & Prezzot-Pearce, 2008). Further, Sanders and colleagues have reported that parents of children at risk of developing emotional or conduct difficulties tend to be less confident in their parenting and find parenting to be stressful, demanding and depressing (Sanders, et al., 2008).

A UK Department of Health child and adolescent mental health services (CAMHS) review conducted in 2008 indicated that 10 to 15 per cent of 5- to 15-year-olds have a diagnosable mental health disorder, which translates to approximately 1.1 million children and young people who might benefit from specialist services. National Institute for Health and Clinical Excellence (NICE) guidelines currently recommend group-based parent-training and education programmes as a first line of treatment for all but the most complex situations (National Institute for Health and Clinical Excellence, 2006). The National

Service Framework for children, young people and maternity services (Department of Health, 2003) has emphasised the need to improve service provision for the families and professionals involved in these children's care. Essentially, this standard highlights the fact that psychological and behavioural interventions have received relatively little research attention, yet constitute the main work of CAMHS professionals. As such, there is a need to more closely examine the parenting group 'package' and identify whether this is a beneficial method of tackling child mental health difficulties in the longer term.

Attunement and attachment.

Many parenting programmes which aim to promote children's emotional and social development focus on parental responses to children's behaviour, and in particular, their ability to 'attune' to the child's needs (Dunst & Kassow, 2008; Egeland, Weinfield, Bosquet, & Cheng, 2000). Attunement in this context refers to the concept as it was originally outlined by psychologists such as Stern (1985), that is, a parent's ability to recognise and match a child's affective state. Stern saw attunement as playing 'an important role in the infant's coming to recognise that internal feeling states are forms of human experience that are shareable with other humans' (pp. 151-152). Typical group training practices include teaching parents observational skills to help them identify how their child could be feeling; that is, to enhance parental sensitivity to emotional states. Group facilitators may also aim to enhance parents' understanding of their child's behaviour by explaining salient issues around child development (Doughty, 2007). One of the theoretical developmental consequences of this kind of sensitive and responsive parenting is a secure infant/adult affectional bond, often termed a secure attachment (Bowlby, 1988).

Early developmental theorists such as Bowlby (Bowlby, 1958, 1959, 1960, 1969) and Ainsworth (1963, 1967; Ainsworth, Blehar, Waters, & Wall, 1978) suggested that a secure attachment to caregivers depended on these adults being consistently sensitive and responsive to their children in social interactions. Responses from caregivers are hypothesised to lead to the development of internal working models which guide the developing child's perceptions, emotions, thoughts and expectations in future relationships (Bretherton & Mulholland, 1999). More recent attachment theorists have taken Ainsworth's idea of sensitivity to be key to the formation of secure and stable emotional development; Gerhardt (2004) writes that 'if caregivers are well attuned to the child, they will be able to acknowledge the child's current emotional state, and symbolise it accurately in words. This allows the child to build up an emotional vocabulary that can identify feelings accurately and can differentiate between different states.' (p. 51). Gerhardt warns that a lack of attunement can lead to damaging effects for the child's ability to express and negotiate feelings with others, with the result that 'the child's sense of self will also remain rather undifferentiated' (p. 52). Child psychopathology has been linked to insecure attachment patterns, whereas secure attachment patterns predict successful acquisition of social skills, intellectual development and the formation of a social identity which may serve as protective factors for mental health (Berlin, et al., 2008; Pearce & Prezzot-Pearce, 2008).

Attitudes towards the idea that children's mental health may be contingent upon parental ability in this domain vary according to different models of emotional development. Bronfenbrenner's (1979) 'ecosystem' model perceives the child within a range of contextual systems; both immediate parent-child interactions and wider, societal constructs such as policies and cultural values.

Social and emotional development of the child in this model is viewed as a product of each of these spheres of influence. Recent systemic models such as Repetti, Taylor and Seeman's (2002) model of 'risky families' highlight factors which may be present in family and social contexts that can be seen as contributing to risk of mental and physical ill health. These authors emphasise that an integrative approach is required to understand the impact of early child environments for future mental health, as the factors they have identified as contributory - aggression, conflict, lack of resources and exposure to stress without external support – have emotional, social and biological sequelae which continue to exert an influence on later developmental progression. While this stance is not in direct opposition to theories which posit parental attunement to emotions as integral to child attachment security and mental well-being, it suggests that a focus on immediate impact on attachment security presents too narrow a picture. The interaction of this factor with other contextual aspects, such as the wider family social contexts, may be important over the longer term.

Children's mental health.

In a recent review of child attachment and mental health, Brumariu and Kerns (2010) supported the widely-held view that poor parent-child attachment is linked to internalising symptoms, anxiety and depression. However, they counsel that it is the interaction of attachment insecurity with other factors such as poor parenting practices (such as parental suppression of autonomy though psychological control; Marsh, McFarland, Allen, McElhaney, & Land, 2003), excessive reassurance seeking (Abela et al., 2005) or high levels of stress (Dallaire & Weinraub, 2007) that is most likely to lead to anxiety and depression. Their conclusion was clear; it is not sufficient to focus on childhood

attachment alone as an indicator for mental health difficulties. Here, attachment category has been purposefully avoided as an outcome measure of the success of parenting groups. While attachment-related training may indeed lead to increased attachment security, this study seeks to determine whether outcomes for children's mental health *specifically* may be equally positive. As such, the question of interest here is whether parenting programmes designed to promote attunement have corollary effects on children's mental wellbeing, specifically their levels of internalising symptoms.

Children's internalising symptoms are of particular interest as they have been demonstrated to show predictive validity for the development of subsequent clinical levels of depression and anxiety in epidemiological work (Kovacs & Devlin, 1998). Individuals diagnosed with internalising disorders are at increased risk of suicide attempts and show impairment across multiple domains (including education, employment and family stability; Bolton et al., 2008). Moreover, children with conduct problems in association with internalising disorders are at an increased risk of significant psychopathology such as anxiety, depression and suicidal behaviour further into adulthood (Atzaba-Poria, Pike, & Deater-Deckard, 2004; Kovacs & Devlin, 1998; Sofronoff, Dalgleish, & Kosky, 2005). As such, it is important to determine whether parents' attendance at group training programmes can be named among protective factors during childhood that may influence the development of internalising difficulties.

A recent Cochrane review (Furlong et al., 2012) looking at behavioural and cognitive-behavioural group-based parenting programmes for children with conduct disorder or oppositional defiant disorder identified only three studies which reported outcomes for child emotional problems specifically. However,

Furlong and colleagues did not report on the outcome of studies which used scales such as the Eyberg Child inventory checklist (Robinson, Eyberg, & Ross, 1980a) or the Achenbach's child behaviour checklist (Achenbach, 1991; Achenbach, McConaughty, & Howell, 1987) that have an 'internalising' subscale, or Goodman's strengths and difficulties questionnaire (Goodman, 1994) which includes a measure of children's emotional difficulties, and as such some studies which are relevant for the purpose of the present investigation may have been excluded from this review.

Objectives

As discussed above, this review aims to address a gap in existing literature by seeking to determine whether parenting groups designed to promote attunement have any demonstrable effect on children's internalising symptoms. Given the suggestions from a number of authors that indicate that a broader, systemic view of children's mental health problems is needed (Brumariu & Kerns, 2010; Repetti, et al., 2002), this study focuses on reports that give an indication of this effect beyond an initial post-training period. Longer-term outcomes can give a better indication of real-world efficacy and cost-effectiveness of programmes designed to elicit systemic change, relative to immediate post-training reports which are not able to demonstrate whether any benefits are lasting, or emergent over time. A longer-term view of parenting groups has also been called for by those working within this area, such as Carolyn Webster-Stratton, founder of one of the parenting programmes endorsed by NICE (National Institute for Health and Clinical Excellence, 2006). Webster-Stratton has noted the lack of studies that address this important question, and suggests that progress in this area may have been hampered by

difficulties with participant attrition within this population, for example (Webster-Stratton, Rinaldi, & Jamila, 2011). This difficulty is mitigated using the present method of synthesising data from multiple studies.

Free-form question.

Do parenting interventions lead to a significant lasting decrease in children's internalising symptoms?

Structured question.

- The population comprises parents receiving a parent-training intervention
- Interventions of interest are those which have been designed to enhance sensitivity to children's emotional and social needs
- Comparisons included will be pre- and post- training outcomes, and comparisons with a control condition (e.g. treatment as usual or an alternative parent-training provision).
- The main outcome of interest will be a systematic measure of children's internalising symptoms, a minimum of five months post-intervention.
- The study designs under consideration may be comparative or longitudinal examining outcomes either between groups who have received different levels of training, or within a population group pre- and post-intervention.

Method

Analytical Strategy

Eligibility criteria.

Searches were limited to English language material and published between January 1980 and December 2014, inclusive. Both primary (published

as full original reports) and secondary (published as systematic reviews and meta-analyses) published works were included. Non-systematic reviews, letters, editorials, expert opinion articles, comments, book chapters or articles published in abstract form were not included.

Studies with parents of children aged between 0-12 years of age, inclusive, as participants were included. Each study had a sample size of more than ten participants. Studies were included if they investigated the effectiveness of an intervention strategy which aimed, at least in part, to directly promote the development of parental sensitivity to their children's emotional or social needs. Clinical and home-based interventions, including group-based parent training programmes, home visiting programmes and relationship-based interventions were considered. Only studies with a minimum follow-up period of 20 weeks were included. Outcomes for children's internalising symptoms considered included self-reports, parental or caregiver (including teacher or social worker) reports, clinical observations and psychometric data.

Studies that focussed on specific populations such as children with an existing health difficulty or foster children were excluded from the review to ensure that results might reflect generic, rather than specialist, CAMHS populations. Similarly, studies which focussed on specific groups of parents, such as parents with drug or alcohol problems, mental health issues or developmental disorders were not included. Interventions that focussed on a primary physical health outcome (e.g. nutrition, accidental injury or use of medical services) or educational outcome (e.g. academic achievement) were also excluded. Finally, interventions for preventing domestic violence, child abuse and neglect, or parental attitudes towards these were not examined.

Information sources.

The literature was searched using the following databases: PsychInfo; PubMed; PsycNet; and The Cochrane Database of Systematic Reviews. Google Scholar was also used to locate and access full-text papers of potentially relevant studies.

Search strategy.

A broad set of search terms were used to increase the sensitivity of the search. Search terms are given below and were combined as a range of keywords using Boolean logic. The abstracts and references of resulting articles were explored for their pertinence to the review. References from the articles found through initial database searches were obtained and further relevant references were identified from the text. The initial searches were carried out in late 2013, with additional searches conducted up to the time of submission of this thesis (April 2015)

Terms to identify population.

Parent* or father* or mother* or caregiver* or famil*

Terms to identify intervention.

Intervention or program* or service or parent-child relation* or attunement or sensitivity or responsiveness

Terms to identify outcome.

Mental health or wellbeing or well-being or psychological well being or psychological well-being or psychological wellbeing or internali?ing or depression or anxiety

Data items.

From each paper, data relating to eligibility criteria were sought: Age of child of participants; nature of parenting interventions and comparison group (control or baseline measure); and method of measuring relevant outcome scores (those pertaining to children's internalising symptoms). Where children's ages were stated according to the treatment group their parents had been placed in, these were averaged across the group and overall group means and standard deviations were reported.

Risk of Bias in Individual Studies

After studies of an acceptable design were retrieved and compiled, the quality of this evidence was compared to pre-specified quality categories, shown in Table 1. These criteria were created to permit ranking of studies according to their potential to report outcomes confounded by variables unrelated to the effect of interest for the present review. As such, the criteria relate to potential sources of bias that could be present in studies in this area, namely data that does not reflect parenting generically, but rather could be linked to maternal or paternal behaviours exclusively; multiple interventions that are delivered simultaneously; inadequate control comparisons; and outcome measures biased by subjective interpretation on the part of an outside observer.

Table 1.

Description of quality assessment of studies included in review

Quality categories	High	Moderate	Low
Participants	Data from both mothers and fathers	Both parents invited, but parents were predominantly either mothers or fathers	Only mothers or only fathers invited
Intervention	Pure parent-training intervention	Parent-training intervention that had child-based or school-based components	Parent-training part of predominantly child-based or classroom-based intervention
Comparison	Randomised controlled study, parent training vs. treatment as usual or wait list control	Parent training compared with other parent-based intervention	Within-participants (pre- and post-intervention) comparison with no control group
Outcome	Direct measure of internalising symptoms in children	Indirect (parent or teacher report) measure of internalising symptoms	Experimenter observation of child's internalising symptoms

Risk of Bias across Studies

To reduce the risk of heterogeneity of studies, strict inclusion criteria were followed, as described above. Studies will be summarised and analysed according to their methodological quality, rather than as one complete group. Further sub-group analysis will be conducted according to outcomes of planned difference tests assessing heterogeneity of follow-up times and intervention methods.

Results

Study Selection

An electronic search was conducted using the databases reported above. Figure 1 reports the process of selecting 30 studied included in this review which reported appropriate long-term outcome data on children's internalising symptoms.

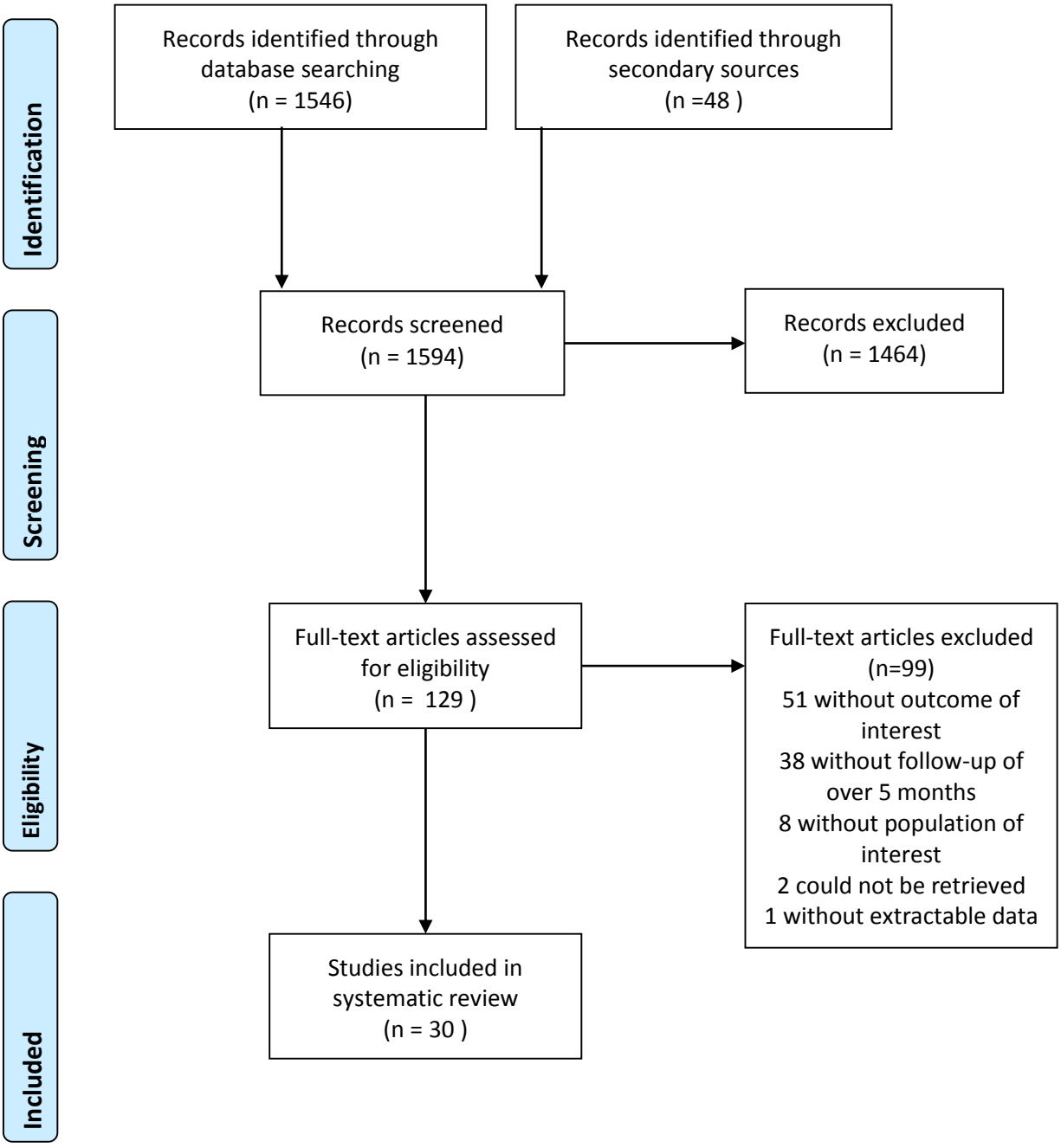

Figure 1. Flow-chart to illustrate systematic review process, adapted from Moher, Liberati, Tetzlaff & Altman, 2009

Synthesis of Results

The association between parenting groups and children's internalising symptoms in the longer-term was examined in 30 studies. Full characteristics of each of these 30 studies included in the review are presented in Appendix A. The mean age of children whose parents were involved in these studies was 5.4 years, and the modal length of follow-up was one year.

Two studies were of high quality – one (Drugli, et al., 2007) found no significant difference in internalising symptoms among children of parents who attended a parent group versus a wait-list control. The other (Simon, et al., 2012) found 'borderline significant' differences between a parent-intervention and no-intervention control group (p =.07), but did not find significant improvements relative to a child-based intervention group.

Thirteen studies were of moderate quality, with 11 of these failing to meet 'high' quality criteria as they relied on parent or teacher reports of children's internalising symptoms rather than reports from children directly. Among the 13 moderate quality studies, four found significant positive effects of parenting groups for internalising symptoms. Perhaps the clearest endorsement for parent-training in this capacity came from Breitenstein et al. (2009), who reported significant improvements in teachers' reports of children's internalising symptoms at a one year follow-up. A second study classified as 'moderate' quality found that parent-training alone was less successful than parent- plus teacher-based interventions (Herman, et al., 2011). Another (Feinberg & Kan, 2008) reported significant effects according to maternal reports of child

soothability, although it is perhaps dangerous to argue that soothability might be related directly to anxiety or depression-like symptoms in children of this age. No such effects were evident from fathers' reports in this study. The fourth (Connolly, et al., 2001) again reported increased improvements of internalising behaviour related to parent- plus teacher-based interventions, relative to parent-only interventions. However, this study demonstrated a 6-month maintenance of the improvement reported immediately post-intervention associated with the parent-intervention group.

Seven of the 14 'low-quality' studies identified indicated significant positive outcomes associated with a parenting group intervention. Three of these studies report data from interventions which were not limited to parent-training, however (Cohen, et al., 2002; Eckshtain & Gaynor, 2013; Sanders, et al., 2008). Three other such studies did not report significant results for children's internalising symptoms (Coughlin, et al., 2009; Scott, et al., 2010; Stewart-Brown, et al., 2004). Three studies which reported data from mothers only reported significant improvements (Cohen, et al., 2002; DeGarmo, et al., 2004) or no significant difference at follow-up from a matched community sample who were assumed to have had fewer difficulties on these scales at a baseline point (Long, et al., 1994). Three studies reporting positive effects of parent-training in this 'low-quality' group did not report a comparison of outcomes with a control group (Cohen, et al., 2002; DeGarmo, et al., 2004; Scott, 2005). One further study (Drugli, et al., 2009) reported a modest decrease in the number of children with clinical levels of internalising symptoms post-intervention, but did not support this with statistical analysis, or compare with a control group.

In sum, while eleven studies reported a positive effect for children's internalising symptoms, seven of these were of low quality and perhaps more vulnerable to confounding variables than the higher-quality studies included in the review. High- and moderate-quality studies reported positive results in 27% of cases (4 of 15 studies).

Risk of Bias across Studies

Measures of heterogeneity were conducted to determine whether sub-group analysis should be conducted according to length of follow-up time, mean child age or differences according to intervention method. A point biserial correlation indicated that there was no significant difference between the length of follow-up time among studies reporting a positive parenting group effect and those that did not report a positive effect ($r_{pb}(28)=0.32$, $p=.09$, two-tailed). A second correlation found no effect of mean child age ($r_{pb}(28)=0.17$, $p=0.39$, two-tailed).

Ten of the identified studies related to Webster-Stratton parenting interventions (e.g. The Incredible Years parents, teachers and children training series – Webster-Stratton & Reid, 2010). Fisher's exact test was conducted to identify whether results from Webster-Stratton based studies were statistically different from those using other intervention methods. This was not found to be the case ($p = 0.69$).

However, as demonstrated in Figure 2, studies included in the present review tended to be from more recent years ($r = 0.66$, $p < .001$), indicating that some bias may be in effect, either in the data extraction method or in this area of publication more widely. These findings will be discussed below.

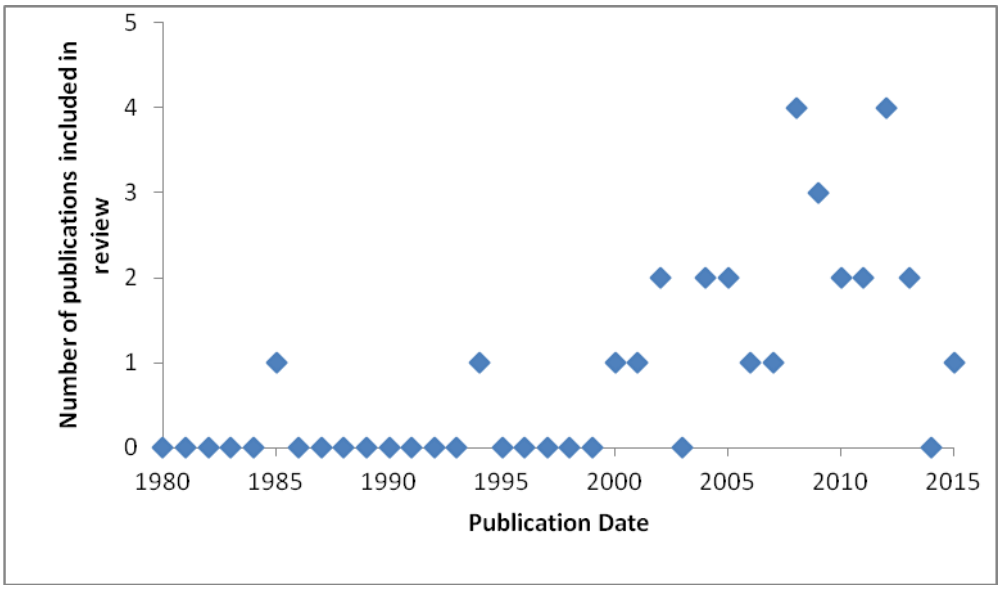

Figure 2. Scatter plot of studies grouped according to date of publication.

Discussion

Summary of Evidence

This work sought to identify whether parenting groups designed to promote attunement can be said to have benefits for children's internalising symptoms beyond an initial post-training period. This review has indicated that parenting groups do not generally lead to significant benefits for children's internalising symptoms in the longer-term. A sub-group of studies that did report such effects were outnumbered by those that did not, and tended to be of poorer methodological quality for the purposes of the present question; confounding variables such as lack of suitable control or lack of 'purity' in intervention may have been influential.

It is of note that a number of previous reviews have highlighted the benefits of parenting groups for parents' mental health (Barlow, Coren, & Stewart-Brown, 2002; Barlow et al., 2011; Barlow, Smailagic, Huband, Roloff, & Bennett, 2012; Furlong, et al., 2012) and for children's conduct or externalising

symptoms (Barlow, 1999b; Furlong, et al., 2012; Lundahl, Risser, & Lovejoy, 2006a). However, it appears that these benefits do not translate to benefits to children's mental health in terms of internalising symptoms in the longer-term. This is somewhat unexpected, perhaps, given the environment-based association between externalising and internalising behaviours that has been documented previously, for example in twin-based studies (Gjone & Stevenson, 1997; Jaffee, Moffitt, Caspi, Taylor, & Arseneault, 2002) and systematic reviews (Hill, 2002). It is beyond the scope of the present review to determine whether the link between externalising and internalising behaviour was entirely absent in the studies documented here, but this work does suggest that a more targeted intervention is necessary to tackle internalising difficulties: Improvements in internalising outcomes do not seem to follow from interventions that have been found elsewhere to be effective for treating and preventing externalising symptoms.

Poor parenting has been identified as a contributory factor in the development of internalising problems by several authors (Bayer, Hiscock, Ukoumunne, Price, & Wake, 2011; Bayer, Sanson, & Hemphill, 2010; Galambos, Barker, & Almeida, 2003; Rapee, Schniering, & Hudson, 2009; Rubin, Burgess, & Hastings, 2002; Williams et al., 2009). Further, a recent systematic review by Brumariu and Kerns (2010) concluded that there is a consistent link between poor parent-child attachment and internalising symptoms in childhood and adolescence. It appears that the approach taken towards parenting training in the studies reviewed here does not lead to reductions in internalising problems. However, this work does not permit dissociation between two hypotheses; firstly, it may be that parenting groups *do* lead to effective change in internalising problems in the short term, but these

are not maintained over longer follow-up periods. Alternatively, it may be that groups were simply ineffective in this regard. Further investigation is needed to determine whether a new approach to parent-training is required to augment or replace existing groups, or whether increased effort might be better placed in supporting maintenance of strategies learned in parenting groups as they stand currently.

Limitations

Analysis of bias across studies indicated that studies included in this review tended to be those published more recently, perhaps indicating that papers from earlier years were not adequately captured using the present method, or that some bias in the publication process was in effect. It may be that this correlation reflects the more recent popularity of parenting groups, boosted by government endorsements (NICE, 2006) and changes to child and adolescent mental health services following a review in 2008 (Department of Health). A larger number of more recently published papers may reflect a general trend towards a population health approach to parenting interventions (Sanders, 1999; Sanders, Bor, & Morawska, 2007).

It could be argued that this review failed to take into account other outcomes that might have been relevant to the question of children's internalising difficulties indirectly, for example, externalising difficulties (cf. Hill, 2002) or parents' mental health (cf. Brumariu & Kerns, 2010). We might expect that these secondary effects would impact on primary measures over time and as such, be more easily detected here than in investigations of shorter-term outcomes. However, given that the average length of follow-up was only one

year, the contribution of secondary effects may not yet be evident in the studies included here.

Lastly, the approach taken here might be criticised for including studies that mainly focus on behavioural approaches to parenting, for example, the Incredible Years Programme (Webster-Stratton & Reid, 2010). Consequently, it is perhaps unsurprising that improvements to emotion-based symptoms were not evident in the way that conduct-based improvements may have been. However, it should be noted that these programmes state as their goal to 'help parents and teachers provide young children (0-12 years) with a strong emotional, social and academic foundation so as to achieve the longer term goal of reducing the development of depression, school drop- out, violence, drug abuse and delinquency in later years' (Incredible Years, 2012). As such, the approach taken here would appear to be a valid test of these claims. Equally, it is important to make clear that an increasing body of evidence renders the internalising / externalising symptom dichotomy invalid – many more recent researchers have pointed to the fact that internalising symptoms often co-exist with externalising symptoms or could be better expressed using one common 'psychopathology' factor (Patalay et al., 2015; Wiggins, Mitchell, Hyde, & Monk, 2015). It may be that the same underlying dysregulation may be expressed as either externalising or internalising symptoms; Patterson, DeBaryshe and Ramsey (1989) give the example of a toddler who experiences punitive responses to outbursts of anger or frustration, for example, and consequently tends to funnel feelings of lack of security into anxiety and other internalising behaviours . Rather than being surprised that internalising symptoms have not been shown here to improve in line with more behavioural indicators, this research casts doubt on the idea that improvements in

externalising scales can be taken as an indication of significant amelioration of childhood mental health problems.

Conclusions

Given the link between children's internalising symptoms and subsequent difficulties in adulthood, including clinical levels of anxiety and depression, suicide risk and poorer prospects in educational and workplace environments (Bolton et al., 2008, Kovacs & Devlin, 1998, Atzaba-Poria, et al., 2004; Kovacs & Devlin, 1998; Sofronoff, et al., 2005), and the high costs associated with their treatment (Greenberg et al., 1999) it is important to identify the best approach for dealing with and preventing internalising difficulties at an early developmental stage. The results of the present review indicate that current parenting-based interventions are unlikely to be fully effective in the long-term and that alternative treatment or prevention strategies are needed to specifically target this area of children's mental health. As discussed previously, the majority of the studies included here focussed on behavioural methods of parenting, without explicitly addressing cognitive factors that may be at play in the development or maintenance of internalising symptoms. A potentially rewarding approach for future work in this area might involve looking at the impact of training in cognitive or emotional aspects of parent-child relationships. These have been largely overlooked in training methods to date, yet could be seen as vital within the process of learning to become attuned to a child.

References

Abela, J. R. Z., Hankin, B. L., Haigh, E. A. P., Adams, P., Vinokuroff, T., & Trayhern, L. (2005). Interpersonal vulnerability to depression in high-risk children: The role of insecure attachment and reassurance seeking. *Journal of Clinical Child and Adolescent Psychology, 34*, 182-192.

Abidin, R. R. (1995). *Parenting Stress Index* (3rd ed.). Florida: Psychological Assessment Resources.

Achenbach, T.M. (1991). Manual for the Child Behavior Checklist 4–18 and 1991 profile: University of Vermont, Department of Psychiatry, Burlington.

Achenbach, T.M., McConaughty, S. H., & Howell, C. T. (1987). Child/adolescent behavioral and emotional problems: Implications of cross-informant correlations for situational specificity. *Psychological Bulletin, 101*(2), 213-232.

Adams, S., Penton-Voak, I.S., Harmer, C.J., Holmes, E.A., & Munafò, M.R. (2013). Effects of emotion recognition training on mood among individuals with high levels of depressive symptoms: Study protocol for a randomised controlled trial. *Trials*(14), 161-169.

Ainsworth, M.D. (1963). The development of infant-mother interaction among the Ganda. In B. M. Foss (Ed.), *Determinants of infant behavior* (pp. 67-104). New York: Wiley.

Ainsworth, M.D. (1967). *Infancy in Uganda: Infant care and the growth of love*. Baltimore: John Hopkins University Press.

Ainsworth, M.D., Blehar, M., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the strange situation*. Hillsdale NJ: Lawrence Erlbaum Associates.

Anderson, I.M., Shippen, C., Juhasz, G., Chase, D., Thomas, E., Downey, D., . . . Deakin, J. F. W. (2011). State-dependent alteration in face emotion recognition in depression. *The British Journal of Psychiatry, 198*(4), 302-308.

Angold, A. , Messer, S.C., Stangl, D., Farmer, E.M., Costello, E.J., & Burns, B.J. (1998). Perceived parental burden and service use for child and adolescent psychiatric disorders. *American Journal of Public Health January, 88*(1), 75-80.

Atzaba-Poria, N., Pike, A., & Deater-Deckard, K. (2004). Do risk factors for problem behaviour act in a cumulative manner? An examination of ethnic minority and majority children through an ecological perspective. *Journal of Child Psychology and Psychiatry, 45*, 707-718.

Aunola, K., Ruusunen, A-K., Viljaranta, J., & Nurmi, J-E. (2013). Parental affection and psychological control as mediators between parents' depressive symptoms and child distress. *Journal of Family Issues*, 1-21.

Axberg, U., & Broberg, A. G. (2012). Evaluation of "The Incredible Years" in Sweden: The tranferability of an American parent-training program to Sweden. *Scandinavian Journal of Psychology, 53*, 224-232.

Bammens, A-S., Adkins, T., & Badger, J. (2015). Psycho-educational intervention increases reflective functioning in foster and adoptive parents. *Adoption and Fostering, 39*(1), 38-50.

Barker, E.D., Copeland, W., Maughan, B., Jaffee, S.R., & Uher, R. (2012). Relative impact of maternal depression and associated risk factors on offspring psychopathology. *British Journal of Psychiatry, 200*(2), 124-129.

Barlow, J. (1999a). *Systematic review of the effectiveness of parent-training programmes in improving behaviour problems in children aged 3-10 years*. Health Services Research Unit: University of Oxford.

Barlow, J. (1999b). *Systematic review of the effectiveness of parent-training programmes in improving behaviour problems in children aged 3-10 years*. University of Oxford: Health Services Research Unit.

Barlow, J., Coren, E., & Stewart-Brown, S. . (2002). Meta-analysis of the effectiveness of parenting programmes in improving maternal psychosocial health. *British Journal of General Practise, 52*(476), 223-233.

Barlow, J., Smailagic, N., Bennett, C., Huband, N., Jones, H., & Coren, E. (2011). Individual and group based parenting programmes for improving psychosocial outcomes for teenage parents and their children. *Cochrane Database of Systematic Reviews*(3). doi: 10.1002/14651858.CD002964.pub2

Barlow, J., Smailagic, N., Huband, N., Roloff, V., & Bennett, C. (2012). Group-based parent training programmes for improving parental psychosocial health. *Cochrane Database of Systematic Reviews, 6*, Art. No.: CD002020.

Bayer, J.K., Hiscock, H., Ukoumunne, O.C., Price, A., & Wake, M. (2011). Early childhood aetiology of mental health problems: A longitudinal population-based study. *Journal of Child Psychology and Psychiatry, 49*(11), 1166-1174.

Bayer, J.K., Sanson, A.V., & Hemphill, S.A. (2010). Early childhood aetiology of internalising difficulties: a longitudinal community study. *International Journal of Mental Health Promotion, 12*, 16-28.

Beck, A.T. (1976). *Cognitive therapy and the emotional disorders*. New York: New American Library.

Beck, A.T. (1987). Cognitive models of depression. *Jounal of Cognitive Psychotherapy, 1*, 5-38.

Beck, A.T. (2008). The evolution of the cognitive model of depression and its neurobiological correlates. *American Journal of Psychiatry, 165*, 969-977.

Beck, A.T., & Clark, D.A. (1997). An information processing model of anxiety: Automatic and strategic processes. *Behaviour Research and Therapy, 35*, 49-58.

Beck, A.T., Steer, R.A., & Brown, G.K. (1996). *Manual for the Beck Depression Inventory-II*. San Antonio, TX: Psychological Corporation.

Belfer, M. L. (2008). A global perspective on child and adolescent mental health. *International Review of Psychiatry, 20*, 215-216.

Berlin, L.J., Cassidy, J., & Appleyard, K. (2008). The influence of early attachments on other relationships. In J. Cassidy & P.R. Shaver (Eds.), *Handbook of Attachment: Theory, Research and Clinical Applications* (pp. 333-347). New York: Guildford Press.

Bolton, J.M., Cox, B.J., Afifi, T.O., Enns, M.W., Bienvenu, O.J., & Sareen, J. . (2008). Anxiety disorders and risk for suicide attempts: Findings from the Baltimore epidemiologic catchment area follow-up study. *Depression and Anxiety, 25*, 477–481.

Bowlby, J. (1958). The nature of the child's tie to his mother. *International Journal of Psycho-Analysis, XXXIX*, 1-23.

Bowlby, J. (1959). Separation anxiety. *International Journal of Psycho-Analysis, XLI*, 1-25.

Bowlby, J. (1960). Grief and mourning in infancy and early childhood. *The Psychoanalytic Study of the Child, VX*, 3-39.

Bowlby, J. (1969). *Attachment. Attachment and Loss* (Vol. 1). London: Hogarth.

Bradley, B. P., Mogg, K., & Lee, S. C. (1997). Attentional biases for negative information in induced and naturally occurring dysphoria. *Behaviour Research and Therapy, 35*, 911-927.

Braet, C., Meerschaert, T., Merledelve, E., Bosmans, G., Van Leeuwen, K., & De Mey, W. (2009). Prevention of antisocial behaviour: Evaluation of an early intervention programme. *European Journal of Developmental Psychology, 6*(2), 223-240.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101.

Breitenstein, S. M., Gross, D., Fogg, L., Ridge, A., Garvey, C., Julion, W., & Tucker, S. (2012). The Chicago parent program: Comparing 1-year outcomes for African American and Latino parents of young children *Research in nursing and health, 35*(5), 475-489. doi: 10.1002/nur.21489

Bretherton, I., & Mulholland, K. A. (1999). Internal working models in attachment relationships: A construct revisited. In J. Cassidy & P.R. Shaver (Eds.), *Handbook of Attachment Theory, Research and Clinical Applications* (pp. 89-114). New York: Guildford Press.

Brock, R. L., Kochanska, G., O'Hara, M. W., & Grekin, R. S. (2015). Life satisfaction moderates the effectiveness of a play-based parenting intervention in low-income mothers and toddlers. *Journal of Abnormal Child Psychology*, 1-12. doi: 10.1007/s10802-015-0014-y

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press.

Brumariu, L. E., & Kerns, K. A. (2010). Parent–child attachment and internalizing symptoms in childhood and adolescence: A review of empirical findings and future directions. *Development and Psychopathology, 22*(1), 177-203.

Burt, V.K., & Stein, K. (2002). Epidemiology of depression throughout the female lifecycle. *Journal of Clinical Psychiatry, 63*(7), 9-15.

Clark, D. A., Beck, A. T., & Alford, B. A. (1999). *Scientific foundations of cognitive theory and therapy for depression*. New York: Wiley.

Cohen, N.J., Lojkasek, M., Muir, E., Muir, R., & Parker, C. J. (2002). Six month follow-up of two mother-infant psychotherapies: Convergence of therapeutic outcome. *Infant Mental Health Journal, 23*(4), 361-380.

Coie, J.D. (1996). Prevention of violence and antisocial behaviour. In R.D. Peters & R.J. McMahon (Eds.), *Preventing childhood disorders, substance*

abuse, and delinquency. Banff international behavioral science series (pp. 1-18). California: Sage Publications.

Conger, R. D., & Elder, G. H. Jr. (1994). *Families in troubled times: Adapting to change in rural America*. New York: De Gruyter.

Connolly, L., Sharry, J., & Fitzpatrick, C. (2001). Evaluation of a group treatment programme for parents of children with behavioural disorders. *Child Psychology and Psychiatry Review, 6*(4), 159-165.

Costello, E.J., Foley, D.L., & Angold, A. (2006). 10-year research update review: The epidemiology of child and adolescent psychiatric disorders: II. *Journal of the American Academy of Child & Adolescent Psychiatry, 45*(1), 8-25.

Coughlin, M., Sharry, J., Fitzpatrick, C., Guerin, S., & Drumm, M. (2009). A controlled clinical evaluation of the parents plus children's programme: A video-based programme for parents of children aged 6 to 11 with behavioural and developmental problems. *Clinical Child Psychology and Psychiatry, 14*(4), 541-558.

Coyne, J.C., & Kwakkenbos, L. (2013). Triple P positive parenting programs: The folly of basing social policy on underpowered flawed studies. *BMC Medicine, 11*, 11.

Craig, P., Dieppe, P., Macintyre, S., Michie, S., Nazareth, I., & Petticrew, M. (2008). Developing and evaluating complex interventions: The new Medical Research Council guidance. [Journal Article]. *British Medical Journal, 337*, 979-983.

Creswell, C., Cooper, P., & Murray, L. (2010). Intergenerational transmission of anxious information processing biases. In J. A. Hadwin & A. P. Field (Eds.), *Information processing biases and anxiety: A developmental perspective*. Oxford: John Wiley & Sons.

Cummings, E.M., & Davies, P. T. (1994). Maternal depression and child development. *Journal of Child Psychology and Psychiatry, 35*, 73-112.

Cummings, E.M., Keller, P.S., & Davies, P.T. (2005). Towards a family process of maternal or paternal depressive symptoms: Exploring multiple relations with child and family functioning. *Journal of Child Psychology and Psychiatry, 46*, 479-489.

Dallaire, D. H., & Weinraub, M. (2007). Infant–mother attachment security and children's anxiety and aggression at first grade. *Journal of Applied Developmental Psychology, 28*, 477-492.

Daly, R.M., Holland, C.J., Forrest, P.A., & Fellbaum, A.G. (1985). Temporal generalization of treatment effects over a three-year period for a parent training program: Directive Parental Counseling (DPC). *Canadian Journal of Behavioural Science, 17*(4), 379-388.

DeGarmo, D. S., Patterson, G. R., & Forgatch, M. S. (2004). How do outcomes in a specified parent training intervention maintain or wane over time? *Prevention Science, 5*, 72-89.

Department of Health. (2003). *Getting the right start: The national service framework for children, young people and maternity services - emerging findings*. London, UK: Department of Health.

Department of Health. (2008). *Children and young people in mind: the final report of the national CAMHS review*. London, UK: Department of Health.

DeSocio, J., & Hootman, J. (2004). Children's mental health and school success. *The Journal of School Nursing, 20*(4), 189-196.

Donnelly, K. (Submitted). Parenting intervention outcomes for children's long-term mental health: A systematic review. *Child: Care, Health and Development*.

Doughty, C. (2007). *Effective strategies for promoting attachment between young children and infants*. Christchurch, New Zealand: New Zealand Health Technology Assessment.

Downey, G., & Coyne, J.C. (1990). Children of depressed parents: An integrative review. *Psychological Bulletin, 108*, 50-76.

Downey, G., Purdie, V., & Schaffer-Neitz, R. (1999). Anger transmission from mother to child: A comparison of mothers in chronic pain and well mothers. *Journal of Marriage and the Family, 61*, 62-73.

Drugli, M. B., & Larsson, B. (2006). Children aged 4-8 years treated with parent training and child therapy because of conduct problems: Generalisation effects to day-care and school settings. *European Child and Adolescent Psychiatry, 15*(7), 392-399.

Drugli, M. B., Larsson, B., & Clifford, G. (2007). Changes in social competence in young children treated because of conduct problems as viewed by multiple sources. *European Child and Adolescent Psychiatry, 16*(6), 370-378.

Drugli, M. B., Larsson, B., Fossum, S., & Mørch, W-T. (2009). Five- to six-year outcome and its prediction for children with ODD/CD treated with parent training. *Journal of Child Psychology and Psychiatry, 51*(5), 559-566.

Duarte, C. S., Sourander, A., Nikolakaros, G., Pihlajamaki, H., Helenius, H., Piha, J., . . . Must, A. (2010). Child mental health problems and obesity in early adulthood. *The Journal of Pediatrics, 156*(1), 93-97.

Dunst, C. J., & Kassow, D. Z. (2008). Caregiver sensitivity, contingent social responsiveness, and secure infant attachment. *Journal of Early and Intensive Behavior Intervention, 5*(1), 40-56.

Eaves, L.J., Silberg, J.L., Meyer, J.M., Maes, H.H., Simonoff, E., Pickles, A., . . . Hewitt, J.K. (1997). Genetics and developmental psychopathology: The main effects of genes and environment on behavioral problems in the Virginia twin study of adolescent behavioral development. *Journal of Child Psychology and Psychiatry, 38*(965-980).

Eckshtain, D., & Gaynor, S. (2011). Combining individual cognitive behaviour therapy and caregiver-child sessions for childhood depression: An open trial. *Clinical Child Psychology and Psychiatry, 17*(2), 266-283.

Eckshtain, D., & Gaynor, S. (2013). Combined individual cognitive behaviour therapy and parent training for childhood depression: 2-3 year follow-up. *Child and Family Behavior Therapy, 35*(2).

Egeland, B., Weinfield, N. S., Bosquet, M., & Cheng, V. K. (2000). Remembering, repeating, and working through: Lessons from attachment-based interventions. In J. D. Osofsky & H. E. Fitzgerald

(Eds.), *Handbook of infant mental health. Vol. 4: Infant mental health in groups at high risk* (pp. 35–89). New York: Wiley.

Egger, H.L., & Angold, A. (2006). Common emotional and behavioural disorders in preschool children: Presentation, nosology, and epidemiology. *Journal of Child Psychology and Psychiatry, 47*(3-4), 313-337.

Elgar, F. J., Mills, R. S. L., McGrath, P. J., Waschbusch, D. A., & Brownridge, D. A. (2007). Maternal and parental depressive symptoms and child maladjustment: The mediating role of parental behavior. *Journal of Abnormal Child Psychology, 35*, 943-955.

Eyberg, S.M., & Ross, A.W. (1978). Assessment of child behaviour problems: The validation of a new inventory. *Journal of Clinical Child Psychology, 7*(2), 113-116.

Eysenck, M.W. (1997). *Anxiety and cognition: A unified theory*. Hove: Psychology Press.

Feinberg, M.E., & Kan, M.L. (2008). Establishing family foundations: Intervention effects on coparenting, parent/infant well-being, and parent-child relations. *Journal of Family Psychology, 22*(2), 253-263.

Forehand, R., Middlebrook, J., Rogers, T., & Steffe, M. (1983). Dropping out of parent training. *Behaviour Research and Therapy, 21*(6).

Friars, P., & Mellor, D. (2009). Drop-out from parenting training programmes: A retrospective study. *Journal of Child and Adolescent Mental Health, 21*(1), 29-38.

Furlong, M., Gilloway, S., Bywater, T., Hutchings, J., Smith, S.M., & Donnelly, M. (2012). Behavioural and cognitive-behavioural group-based parenting

programmes for early-onset conduct problems in children aged 3 to 12 years (Review). *The Cochrane Library, 2*.

Galambos, N.L., Barker, E.T., & Almeida, D.M. (2003). Parents do matter: Trajectories of change in externalising and internalising problems in early adolescence. *Child Development, 74*(2), 578-594.

Gerhardt, S. (2004). *Why love matters: how affection shapes a baby's brain*. London: Brunner Routledge.

Gjone, H., & Stevenson, J. (1997). The association between internalizing and externalizing behavior in childhood and early adolescence: Genetic or environmental common influence? *Journal of Abnormal Child Psychology, 25*(4), 277-286.

Goodman, R. (1994). A modified version of the Rutter parent questionnaire including extra items of children's strengths. A research note. *Journal of Child Psychology and Psychiatry, 35*, 1483–1494.

Goodman, R. (1997). The Strengths and Difficulties Questionnaire: A research note. *Journal of Child Psychology and Psychiatry, 38*, 581-586.

Goodman, S. H., & Gotlib, I. H. (1999). Risk for psychopathology in the children of depressed mothers: A developmental model for understanding mechanism of transmission. *Psychological Review, 106*, 458-490.

Greenberg, P. E., Sisitsky, T., Kessler, R. C., Finkelstein, S. N., Berndt, E. R., Davidson, J. R. T., . . . Fyer, A. J. (1999). The economic burden of anxiety disorders in the 1990s. *Journal of Clinical Psychiatry, 60*, 427–435.

Griffin, C., Guerrin, S., Sharry, J., & Drumm, M. (2010). A multicentre controlled study of an early parenting intervention programme for young children with behavioural and developmental difficulties. *International Journal of Clinical and Health Psychology, 10*(2), 279-294.

Gross, D., Julion, W., & Fogg, L. (2001). What motivates participation and drop-out among low-income urban families of color in a prevention intervention? *Family Relations, 50*, 246-254.

Gross, L., Fogg, L., & Tucker, S. (1995). The efficacy of parent training for promoting positive parent-toddler relationships. *Research in nursing and health, 18*, 489-499.

Gunlicks, M.L., & Weissman, M.M.C. (2008). Change in child psychopathology with improvement in parental depression: A systematic review. *Journal of the American Academy of Child & Adolescent Psychiatry, 47*, 279-389.

Gur, R.C., Erwin, R.J., Gur, R.E., Zwil, A.S., Heimberg, C., & Kraemer, H.C. (1992). Facial emotion discrimination: II. Behavioral findings in depression. *Psychiatry Research, 42*(3), 241-251.

Halligan, S.L., Murray, L., Martins, C., & Cooper, P.J. (2007). Maternal depression and psychiatric outcomes in adolescent offspring: A 13-year longitudinal study. *Journal of Affective Disorders, 97*(1–3), 145-154.

Harmer, C.J., Goodwin, G.M., & Cowen, P.J. (2009). Why do antidepressants take so long to work? A cognitive neuropsychological model of antidepressant drug action. *The British Journal of Psychiatry, 195*(2), 102-108.

Herman, K.C., Borden, L.A., Reinke, W.M., & Webster-Stratton, C. (2011). The impact of the incredible years parent, child and teacher training programs on children's co-occurring internalising symptoms. *School Psychology Quarterly, 26*(3), 189-201.

Hill, J. (2002). Biological, psychological and social processes in the conduct disorders. *Journal of Child Psychology and Psychiatry, 43*(1), 133-164. doi: 10.1111/1469-7610.00007

Incredible Years. (2012). The Incredible Years parents, teachers and children training series Retrieved 24th September, 2012, from http://www.incredibleyears.com/About/about.asp

Jaffee, S.R., Moffitt, T.E., Caspi, A., Taylor, A., & Arseneault, L. (2002). Influence of adult domestic violence on children's internalizing and externalizing problems: An environmentally informative twin study. *Journal of the American Academy of Child and Adolescent Psychiatry, 41*(9), 1095-1103. doi: 10.1097/00004583-200209000-00010

Johnston, C., & Mash, E.J. (1989). A measure of parenting satisfaction and efficacy. *Journal of Clinical Child Psychology, 18*(2), 167-175.

Jones, P.B. (2013). Adult mental health disorders and their age at onset. *British Journal of Psychiatry, 202*, s5 – s10.

Kane, P., & Garber, J. (2004). The relations among depression in fathers, children's psychopathology, and father-child conflict: A meta-analysis. *Clinical Psychology Review, 24*, 399-360.

Kazdin, A. E. (1990). Premature termination from treatment among children referred for antisocial behaviour. *Journal of Child Psychology and Psychiatry, 31*(3), 415-425.

Kazdin, A. E. (1997). Parent management training: Evidence, outcomes and issues. *Journal of the American Academy of Child & Adolescent Psychiatry, 36*(10), 1349-1356.

Klasen, H., & Crombag, A. (2013). What works where? A systematic review of child and adolescent mental health interventions for low and middle income countries. *Social Psychiatry and Psychiatric Epidemiology, 48*, 595-611.

Kovacs, M., & Devlin, B. (1998). Internalizing disorders in childhood. *Journal of Child Psychology and Psychiatry, 39*, 47–63.

Kroenke, K., Spitzer, R .L., & Williams, J.B.W. (2001). The PHQ-9. Validity of a brief depression severity measure. *Journal of General Internal Medicine, 16*(9), 606-613.

Larner, G. (2003). Integrating family theapy in child and adolescent mental health practice: An ethic of hospitality. *Australian and New Zealand Journal of Family Therapy, 24*(4), 211-219.

Lavoie, R., & Hodgins, S. (1994). Mental disorders among children with one parent with a lifetime diagnosis of major depression. In S. Hodgins, C. Lane, M. Lapalme & et al (Eds.), *A critical review of the literature on children at risk for major affective disorders* (pp. 37-82). Ottawa, Canada: Strategic Fund for Children's Mental Health.

Lewinsohn, P. M., Rohde, P., & Seeley, J. R. (1998). Major depressive disorder in older adolescents: Prevalence, risk factors, and clinical implications. *Clinical Psychology Review, 18*(7), 765-794. doi: http://dx.doi.org/10.1016/S0272-7358(98)00010-5

Lindsay, G., Strand, S., Cullen, M.A., Cullen, S.M., Band, S., Davis, H., . . . Evans, R. (2011). *Parenting Early Intervention Programme evaluation*. London, UK: Department for Education.

Loeber, R., & Farrington, D. P. (1998). Never too early, never too late: Risk factors and successful interventions for serious and violent juvenile offenders. *Studies on Crime & Crime Prevention, 7*, 7-30.

Long, P., Forehand, R., Wierson, M., & Morgan, A. (1994). Does parent-training with noncompliant children have long-term effects? *Behaviour Research and Therapy, 32*(1), 101-107.

Lovejoy, M.C., Graczyk, P.A., O'Hare, E., & Neuman, G. (2000). Maternal depression and parenting behaviour. *Clinical Psychology Review, 20*, 561-592.

Lundahl, B., Risser, H. J., & Lovejoy, C. (2006a). A meta-analysis of parent training: Moderators and follow-up effects. *Clinical Psychology Review, 26*, 86-104.

Lundahl, B., Risser, H. J., & Lovejoy, C. (2006b). A meta-analysis of parent training: Moderators and follow-up effects. *Clinical Psychology Review, 26*, 86-104.

Lundqvist, D., Flykt, A., & Öhman, A. (1998). *Karolinska Directed Emotional Faces – KDEF*. Stockholm: Karolinska Institute.

Marsh, P., McFarland, F. C., Allen, J. P., McElhaney, K. B., & Land, D. (2003). Attachment, autonomy, and multifinality in adolescent internalizing and risky behavioral symptoms. *Development and Psychopathology, 15*, 451–467.

Mathews, A., & MacLeod, C. (2005). Cognitive vulnerability to emotional disorders. *Annual Review of Clinical Psychology, 1*, 167-195.

Maxwell, S.E. (2004). The persistence of underpowered studies in psychological research: Causes, consequences and remedies. *Psychological Methods, 9*(2), 147-163.

McLeod, B. D., Weisz, J. R., & Wood, J. J. (2007). Examining the association between parenting and childhood depression: A meta-analysis. . *Clincal Psychology Review*(27), 986-1003.

Meltzer, H., Gatward, R., Goodman, R., & Ford, T. (1999). *The Mental Health of Children and Adolescents in Great Britain*. London: England Office for National Statistics.

Meltzer, H., Gatward, R., Goodman, R., & Ford, T. (2000). *Mental health of children and adolescents in Great Britain*. London, UK: The Stationery Office.

Moher, D., Liberati, A., Tetzlaff, J., & Altman, D.G. (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA Statement. *PloS Med, 6*(7), e1000097.

Moran, P., Kelesidi, K., Guglani, S., Davidson, S., & Ford, T. (2012). What do parents and carers think about routine outcome measures and their use?

A focus group of CAMHS attenders. *Clinical Child Psychology and Psychiatry, 17*(1), 65-79.

National Institute for Health and Clinical Excellence. (2006). *Parent-training/education programmes in the management of children with conduct disorders*. London, UK: NICE Technology Appraisal Guidance.

NHS England. (2013). Planning and delivering service changes for patients Retrieved 8th October, 2014, from http://www.england.nhs.uk/wp-content/uploads/2013/12/plan-del-serv-chge1.pdf

Ogden, T., & Hagen, K. A. (2008). Treatment effectiveness of parent management training in Norway: A randomised controlled trial of children with conduct problems. *Journal of Consulting and Clinical Psychology, 76*(4), 607-621.

Owens, P.L., Hoagwood, K., Horwitz, S.M., Leaf, P.J., Poduska, J.M., Kellam, S.G., & Ialongo, N.S. (2002). Barriers to children's mental health services. *Journal of the American Academy of Child & Adolescent Psychiatry, 41*(6), 731-738.

Oyserman, D., Bybee, D., & Mowbray, C. (2002). Influences of maternal mental illness on psychological outcomes for adolescent children. *Journal of Adolescence, 25*, 587-602.

Patalay, P., Fonagy, P., Deighton, J., Belsky, J., Vostanis, P., & Wolpert, M. (2015). A general psychopathology factor in early adolescence. *The British Journal of Psychiatry*. doi: 10.1192/bjp.bp.114.149591Patel, V., Flisher, A. J., Hetrick, S., & McGorry, P. (2007). Mental health of young

people: A global public-health challenge. *The Lancet, 369*(9569), 1302-1313.

Patterson, G.R., DeBaryshe, B.D., & Ramsey, E. (1989). A developmental perspective on antisocial behavior. American Psychologist, 44(2), 329-335.

Patterson, J., Barlow, J., Mockford, C., Klimes, I., Pyper, C., & Stewart-Brown, S. (2002). Improving mental health through parenting programmes: Block randomised controlled trial. *Archives of Disease in Childhood, 87*, 472-477.

Pearce, J. W., & Prezzot-Pearce, T. D. (2008). *Psychotherapy of abused and neglected children* (2nd ed.). New York: Guildford Press.

Penton-Voak, I.S., Bate, H., Lewis, G., & Munafò, M.R. (2012). Effects of emotion perception training on mood in undergraduate students: Randomised controlled trial. *The British Journal of Psychiatry, 201*, 71-71.

Penton-Voak, I.S., Thomas, J., Gage, S.H., McMurran, M., McDonald, S., & Munafò, M.R. (2013). Inreasing recognition of happiness in ambigous facial expressions reduces anger and aggressive behavior. *Psychological Science, 24*(5), 688-697.

Pilowsky, D.J., Wickramaratne, P., Talati, A., Tang, M., Hughes, C.W., Garber, J., . . . Weissman, M.M. (2008). Children of depressed mothers 1 year after the initiation of maternal treatment: findings from the STAR*D-Child Study. *American Journal of Psychiatry, 165*, 1136-1147.

Rapee, R.M., Schniering, C.A., & Hudson, J.L. (2009). Anxiety disorders during childhood and adolescence: origins and treatment. *Annual Review of Clinical Psychology, 5*, 311-341.

Repetti, R. L., Taylor, S.E., & Seeman, T. E. (2002). Risky families: Family social environments and the mental and physical health of offspring. *Psychological Bulletin, 128*(2), 330-366.

Richter, P., Werner, J., Heerlein, A., Kraus, A., & Sauer, H. (1998). On the validity of the Beck Depression Interview: A review. *Psychopathology, 31*(3), 160-168.

Riessman, C.K. (1993). *Narrative analysis*. London: Sage.

Robinson, E.A., & Eyberg, S.M. (1981). The dyadic parent-child interaction coding system: Standardisation and validation. *Journal of Consulting and Clinical Psychology, 49*(2), 245-250.

Robinson, E.A., Eyberg, S.M., & Ross, A.W. (1980a). The standardization of an inventory of child conduct problem behaviors. *Journal of Child Psychology and Psychiatry, 9*, 22-29.

Robinson, E.A., Eyberg, S.M., & Ross, A.W. (1980b). The standardization of an inventory of child conduct problem behaviours. *Journal of Clinical Child Psychology, 9*(1), 22-28.

Roiser, J.P., Elliott, R., & Sahakian, B.J. (2012). Cognitive mechanisms of treatment in depression. *Neuropsychopharmacology, 37*(1), 117-136.

Rubin, K.H., Burgess, K.B., & Hastings, P.D. (2002). Stability and social-behavioral consequences of toddlers' inhibited temperament and parenting behaviors. *Child Development, 73*, 483-495.

Sanders, M. (1999). Triple P-Positive Parenting Program: Towards an empirically validated multilevel parenting and family support strategy for the prevention of behavior and emotional problems in children. *Clinical Child and Family Psychology Review, 2*, 71–90.

Sanders, M., Bor, W., & Morawska, A. (2007). Mainentance of treatment gains: A comparison of enhanced, standard and self-directed Triple P-Positive parenting program. *Journal of Abnormal Child Psychology, 35*(6), 983-998.

Sanders, M., Ralph, A., Sofronoff, K., Gardiner, P., Thompson, R., Dwyer, S., & Bidwell, K. (2008). Every family: A population approach to reducing behavioral and emotional problems in children making the transition to school. *The Journal of Primary Prevention, 29*(3), 197-222. doi: 10.1007/s10935-008-0139-7

Scott, S. (2005). Do parenting programmes for severe child antisocial behaviour work over the longer term, and for whom? One year follow-up of a multi-centre controlled trial. *Behavioural and Cognitive Psychotherapy, 33*(4), 403-421.

Scott, S., Sylva, K., Doolan, M., Price, J., Jacobs, B., Crook, C., & Landau, S. (2010). Randomised controlled trial of parent groups for child antisocial behaviour targeting multiple risk factors: the SPOKES project. *Journal of Child Psychology and Psychiatry, 51*(1), 48-57.

Sharry, J., Guerin, S., Griffin, C., & Drumm, M. (2005). An evaluation of the parents plus early years programme: A video-based early intervention for

parents of pre-school children with behavioural and developmental difficulties. *Clinical Child Psychology and Psychiatry, 10*(3), 319-336.

Shelton, T.L., Barkley, R. A., Crosswait, C., Moorehouse, M., Fletcher, K., Barrett, S., . . . Metevia, L. (2000). Multimethod psychoeducational intervention for preschool children with disruptive behaviour: Two year post-treatment follow-up. *Journal of Abnormal Child Psychology, 28*(2), 253-266.

Simon, E., Dirksen, C., Bogels, S., & Bodden, D. (2012). Cost-effectiveness of child-focused and parent-focused interventions in a child anxiety prevention program. *Journal of Anxiety Disorders, 26*, 287– 296.

Sofronoff, K., Dalgleish, L., & Kosky, R. (2005). *Out of options: A cognitive model of adolescent suicide and risk-taking*. Cambridge: Cambridge University Press.

Spieker, S.J., Oxford, M.L., Kelly, J.F., Nelson, E.M., & Fleming, C.B. (2012). Promoting first relationships: Randomised trial of a relationship-based intervention for toddlers in child welfare. *Child Maltreatment, 00*(0), 1-16.

Stern, D.N. (1985). The interpersonal world of the infant. New York: Basic Books.

Stevenson , J., Simpson, J., & Bailey, V. (1989). The factor structure of the GHQ-30 for mothers with young children. *Journal of Reproductive and Infant Psychology, 7*(1), 39-46.

Stewart-Brown, S., Patterson, J., Mockford, C., Barlow, J., Klimes, I., & Pyper, C. (2004). Impact of a general based practise group parenting

programme: Quantitative and qualitative results from a controlled trial at 12 months. *Archives of Disease in Childhood, 89*, 519-525.

Tully, E.C., Iacono, W.G., & McGue, M. (2008). An adoption study of parental depression as an environmental liability for adolescent depression and childhood disruptive disorders. *American Journal of Psychiatry, 165*, 1148-1154.

Turney, K. (2011). Labored love: Examining the link between maternal depression and parenting behaviors. *Social Science Research, 40*, 399-415.

van den Oord, E.J., Boomsma, D.I., & Verhulst, F.C. (1994). A study of problem behaviors in 10- to 15-year-old biologically related and unrelated international adoptees. *Behavioural Genetics, 24*, 193-205.

Vimpani, G., Patton, G., & Hayes, A. (2002). The relevance of child and adolescent development for outcomes in education, health and life success. In A. Sanson (Ed.), *Children's health and development: New research directions for Australia* (pp. 14-37). Melbourne: Australian Institute of Family Studies.

Webster-Stratton, C., & Reid, M.J. (2010). The Incredible Years parents, teachers, and children training series: A multifaceted treatment approach for young children with conduct disorders. In J.R. Weisz & A.E. Kazdin (Eds.), *Evidence based psychotherapies for children and adolescents* (2nd ed.). New York: The Guildford Press.

Webster-Stratton, C., Rinaldi, J., & Jamila, M. R. (2011). Long-term outcomes of Incredible Years parenting program: Predictors of adolescent adjustment. *Child and Adolescent Mental Health, 16*(1), 38-46.

Weissman, M.M., Pilowsky, D.J., Wickramaratne, P.J., Talati, A., Wisniewski, S.R., Fava, M., . . . Rush, A.J. (2006). Remissions in maternal depression and child psychopathology: A STAR*D-child report. *Journal of the American Medical Association, 295*(1389-1398).

Wichman, B.A., & Hill, I.D. (1982). Algorithm AS 183: An efficient and portable pseudo-random number generator. *Applied Statistics, 31*, 188-190.

Wiggins, J.L., Mitchell, C., Hyde, L.W., & Monk, C.S. (2015). Identifying early pathways of risk and resilience: The codevelopment of internalizing and externalizing symptoms and the role of harsh parenting. Development and Psychopathology, FirstView, 1-18. doi: doi:10.1017/S0954579414001412

Williams, L.R., Degnan, K.A., Perez-Edgar, K.E., Henderson, H.A., Rubin, K.H., Pine, D.S., . . . Fox, N.A. (2009). Impact of behavioral inhibition and parenting style on internalizing and externalizing problems from early childhood through adolescence. *Journal of Abnormal Child Psychology, 37*(8), 1063-1075.

Wilson, P., Rush, R., Hussey, S., Puckering, C., Sim, F., Alley, C.S., . . . Gillberg, C. (2012). How evidence-based is an 'evidence-based parenting program'? A PRISMA systematic review and meta-analysis of Triple-P. *BMC Medicine, 10*, 130.

Wilson, S., & Durbin, C.E. (2010). Effects of paternal depression on fathers' parenting behaviours: A meta-analytic review. *Clinical Psychology Review, 30*, 167-180.

Wolpert, M., Ford, T., Trustam, E., Law, D., Deighton, J., Flannery, H., & Fugard, R.J.B. (2012). Patient-reported outcomes in child and adolescent mental health services (CAMHS): Use of ideographic and standardized measures. *Journal of Mental Health, 21*(2), 165-172.

Appendices

Appendix A: Instructions for Authors from Journal of Consulting and Clinical Psychology

Title of Manuscript

The title of a manuscript should be accurate, fully explanatory, and preferably no longer then 12 words. The title should reflect the content and population studied (e.g., "treatment of generalized anxiety disorders in adults").
If the paper reports a randomized clinical trial (RCT), this should be indicated in the title. Note that JARS criteria must be used for reporting purposes.

Abstract

All manuscripts must include an abstract containing a maximum of 250 words typed on a separate page. After the abstract, please supply up to five keywords or brief phrases.
Manuscripts published in the *Journal of Consulting and Clinical Psychology* will include a structured abstract of up to 250 words.
For studies that report randomized clinical trials or meta-analyses, the abstract also must be consistent with the guidelines set forth by JARS or MARS (Meta-Analysis Reporting Standards) guidelines, respectively. Thus, in preparing a manuscript, please ensure that it is consistent with the guidelines stated below.
Please include an Abstract of up to 250 words, presented in paragraph form. The Abstract should be typed on a separate page (page 2 of the manuscript), and must include each of the following sections:

- **Objective:** A brief statement of the purpose of the study
- **Method:** A detailed summary of the participants (N, age, gender, ethnicity) as well as descriptions of the study design, measures (including names of measures), and procedures
- **Results:** A detailed summary of the primary findings that clearly articulate comparison groups (if relevant), and that indicate significance or confidence intervals for the main findings
- **Conclusions:** A description of the research and clinical implications of the findings

Public Health Significance Statements

Authors submitting manuscripts to the *Journal of Consulting and Clinical Psychology* are required to provide 2–3 brief sentences regarding the public health significance of the study or meta-analysis described in their paper. It should be written in language that is easily understood by both professionals and members of the lay public.
Examples are included below. This description should be included within the manuscript on the abstract/keywords page.
When an accepted paper is published, these sentences will be boxed beneath the abstract for easy accessibility. All such descriptions will also be published in the back of each issue, as well as on the journal's web page. This new policy is in keeping with efforts to increase dissemination and usage by larger and diverse audiences.
Examples of these 2–3 sentences include the following:
"This study strongly suggests that (description of a given psychosocial treatment) is an effective treatment for anxiety, but only if it is of mild to moderate severity. For persons with severe anxiety, additional treatments may be necessary."
"When treating individuals of (name of a particular ethnic minority group) who are experiencing PTSD, this study demonstrated the importance of taking into account cultural factors, especially those that involve one's spiritual beliefs."
"This study highlights the importance of directly including one's family in treatment when helping adults diagnosed with cancer overcome their depression."

Keywords

Please supply up to five keywords or short phrases.

Participants: Description and Informed Consent

The Method section of each empirical report must contain a detailed description of the study participants, including (but not limited to) the following: age, gender, ethnicity, SES, clinical diagnoses and comorbidities (as appropriate), and any other relevant demographics.
In the Discussion section of the manuscript, authors should discuss the diversity of their study samples and the generalizability of their findings.
The Method section also must include a statement describing how informed consent was obtained from the participants (or their parents/guardians) and indicate that the study was conducted in compliance with an appropriate Internal Review Board.

Measures

The Method section of empirical reports must contain a sufficiently detailed description of the measures used so that the reader understands the item content, scoring procedures, and total scores or subscales. Evidence of reliability and validity with similar populations should be provided.

Statistical Reporting of Clinical Significance

JCCP requires the statistical reporting of measures that convey clinical significance. Authors should report means and standard deviations for all continuous study variables and the effect sizes for the primary study findings. (If effect sizes are not available for a particular test, authors should convey this in their cover letter at the time of submission.)
JCCP also requires authors to report confidence intervals for any effect sizes involving principal outcomes (see Fidler et al., *Journal of Consulting and Clinical Psychology*, 2005, pp. 136–143 and Odgaard & Fowler, *Journal of Consulting and Clinical Psychology*, 2010, pp.287–297).
In addition, when reporting the results of interventions, authors should include indicators of clinically significant change. Authors may use one of several approaches that have been recommended for capturing clinical significance, including (but not limited to) the reliable change index (i.e., whether the amount of change displayed by a treated individual is large enough to be meaningful; see Jacobson et al., *Journal of Consulting and Clinical Psychology*, 1999), the extent to which dysfunctional individuals show movement into the functional distribution (see Jacobson & Truax, *Journal of Consulting and Clinical Psychology*, 1991), or other normative comparisons (see Kendall et al., *Journal of Consulting and Clinical Psychology*, 1999).
The special section of *JCCP* on "Clinical Significance" (*Journal of Consulting and Clinical Psychology*, 1999, pp. 283–339) contains detailed discussions of clinical significance and its measurement and should be a useful resource (see also Atkins et al., *Journal of Consulting and Clinical Psychology*, 2005, pp. 982–989).

Discussion of Clinical Implications

Articles must include a discussion of the clinical implications of the study findings or analytic review. The Discussion section should contain a clear statement of the extent of clinical application of the current assessment, prevention, or treatment methods. The extent of application to clinical practice may range from suggestions that the data are too preliminary to support widespread dissemination to descriptions of existing manuals available from the authors or archived materials that would allow full implementation at present.

Randomized Clinical Trials: Use of JARS Guidelines

JCCP requires the use of JARS guidelines for randomized clinical trials, consistent with the recommendations and policies established by the Publications and Communications Board of the American Psychological Association. JARS offers a standard way to improve the quality of such reports, and to ensure that readers have the information necessary to evaluate the quality of a clinical trial.
Manuscripts that report randomized clinical trials are required to include a flow diagram of the progress through the phases of the trial. When a study is not fully consistent with JARS guidelines, the limitations should be acknowledged and discussed in the text of the manuscript.
For follow-up studies of previously published clinical trials, authors should submit a flow diagram of the progress through the phases of the trial and follow-up. The above checklist information should be completed to the extent possible, especially for the Results and Discussion sections of the manuscript.

Authors of RCTs should also describe procedures to assess for treatment fidelity (also known as treatment integrity), including both therapist adherence and competence. Where possible, results should be reported regarding the relationship between fidelity and outcome found in the investigation.

- View the JARS guidelines (PDF, 98KB)

Meta-Analyses of Randomized Clinical Trials: Use of MARS Guidelines

JCCP requires the use of the APA MARS guidelines for meta-analyses of randomized clinical trials. MARS offers a standard way to improve the quality of such reports, and to ensure that readers have the information necessary to evaluate the quality of a meta-analysis.
Manuscripts that report meta-analyses of randomized clinical trials are required to include a flow diagram of the progress through the stages of the meta-analysis. When a study is not fully consistent with MARS, the limitations should be acknowledged and discussed in the text of the manuscript.
MARS guidelines are included in the JARS guidelines (PDF, 98KB)

Nonrandomized Trials

For nonrandomized designs that often are used in public health and mental-health interventions, *JCCP* requires compliance with JARS.
Failure to comply with JARS or MARS can result in the return of manuscripts without review.

Manuscript Preparation

Prepare manuscripts according to the *Publication Manual of the American Psychological Association* (6th edition). Manuscripts may be copyedited for bias-free language (see Chapter 3 of the *Publication Manual*).
Review APA's Checklist for Manuscript Submission before submitting your article.
Double-space all copy. Other formatting instructions, as well as instructions on preparing tables, figures, references, metrics, and abstracts, appear in the *Manual*.
Below are additional instructions regarding the preparation of display equations, computer code, and tables.

References

List references in alphabetical order. Each listed reference should be cited in text, and each text citation should be listed in the References section.

Length and Style of Manuscripts

Full-length manuscripts should not exceed 35 pages total (including cover page, abstract, text, references, tables, and figures), with margins of at least 1 inch on all sides and a standard font (e.g., Times New Roman) of 12 points (no smaller). The entire paper (text, references, tables, etc.) must be double spaced. Instructions on preparing tables, figures, references, metrics, and abstracts appear in the *Publication Manual of the American Psychological Association* (6th edition).
Authors submitting manuscripts that report new data collection, especially randomized clinical trials (RCTs), should comply with the newly developed APA Journal Article Reporting Standards (PDF, 98KB) (JARS; see *American Psychologist*, 2008, *63*, 839–851 or Appendix in the *APA Publication Manual*).
For papers that exceed 35 pages, authors must justify the extended length in their cover letter (e.g., reporting of multiple studies), and in no case should the paper exceed 45 pages total. Papers that do not conform to these guidelines may be returned without review.

The References section should immediately follow a page break.

Appendix B: Studies Included in Review

Authors	Date	Publication Title	Participants	Child age range (mean and standard deviation)	Mean age of child	Comparison	Follow-up point (months)	Positive result?[1]	Study Quality
DeGarmo , D. S., Patterson, G. R., & Forgatch, M. S.	2004	How do outcomes in a specified parent training intervention maintain or wane over time?	Mothers	6.1-10.4 (7.7, SD = 0.93)	7.7	Parent management training vs. no intervention control	30	Yes	Low
Herman , K. C., Borden, L. A., Reinke, W. M., & Webster-Stratton, C.,	2011	The impact of the Incredible Years parent, child, and teacher training programs on children's co-occurring internalizing symptoms	Both mothers and fathers	4-8 (5.9)	5.9	Parent-training vs. parent plus teacher training vs. child training vs. child plus teacher training	12	Yes	Moderate
Spieker, S. J., Oxford, M. L., Kelly, J. F., Nelson, E. M., & Fleming, C. B.	2012	Promoting first relationships: Randomised trial of a relationship-based intervention for	Both mothers and fathers	0.8-2 (1.5, SD = 0.4)	1.5	Promoting first relationships vs. comparison (Early Education Support).	6	No	Moderate

[1] 'Positive result' refers here to a result that indicates that parent training positively impacts on internalising symptoms

		toddlers in child welfare							
Axberg, U., & Broberg, A. G	2012	Evaluation of ‘‘The Incredible Years’’ in Sweden: The transferability of an American parent-training program to Sweden	Both mothers and fathers	4-8 (NR)	6	Parent training vs. waiting list control	12	No	Moderate
Feinberg, M. E., & Kan, M. L.	2008	Establishing family foundations: Intervention effects on co-parenting, parent/infant wellbeing, and parent-child relations	Both mothers and fathers	0-0.5(NR)	0.25	Family foundations intervention vs. matched no treatment control	6	Yes and No	Moderate
Breitenstein, S. M., Gross, D., Fogg, L., Ridge, A., Garvey, C., Julion, W., & Tucker, S.	2012	The Chicago Parent Program: Comparing 1-Year outcomes for African-American and Latino parents	Both mothers and fathers	2-4 (2.8, SD 0.73)	2.8	Chicago Parenting Programme vs. matched no-treatment control	12	Yes	Moderate
Cohen, N. J., Lojkasek, M., Muir, E., Muir, R., & Parker, C.J.	2002	Six month follow-up of two mother-infant psychotherapies: Convergence of therapeutic outcome	Mothers	10-30 months (NR)	1.6	Wait, watch and wonder technique vs. parent-infant psychotherapy	6	Yes	Low

Simon, E., Dirksen, C., Bogels, S., & Bodden, D.	2012	Cost-effectiveness of child-focused and parent-focused interventions in a child anxiety prevention program	Both mothers and fathers	8-12 (9.83, SD = 1.19)	9.83	Child-focused intervention vs. parent-focused intervention vs. non-intervention	12	Yes	High
Griffin, C., Guerrin, S., Sharry, J., & Drumm, M.	2010	A multicentre controlled study of an early parenting intervention programme for young children with behavioural and developmental difficulties	Both mothers and fathers	3-6(4.41, SD =0.8)	4.41	Intervention (Parent Plus Early Years programme) vs. treatment as usual, comparing children with/without developmental difficulties	5	No	Moderate
Shelton, T.L., Barkley, R. A., Crosswait, C., Moorehouse, M., Fletcher, K., Barrett, S., Jenkins, L., & Metevia, L.	2000	Multimethod psychoeducational intervention for preschool children with disruptive behaviour: Two year post-treatment follow-up	Both mothers and fathers	4.5-5.5 (4.8, SD = 0.5)	4.8	No-treatment group vs. parent-training only vs. classroom treatment only vs. parent plus teacher training	24	No	Moderate
Sharry, J., Guerin, S., Griffin, C., & Drumm, M.	2005	An evaluation of the parents plus early years programme: A video-based early intervention for parents of pre-school	Both mothers and fathers	2-5 (3.9, SD = 1.02)	3.9	Pre- and post-intervention (Parents Plus programme)	5	No	Low

		children with behavioural and developmental difficulties							
Scott, S., Sylva, K. Doolan, M., Price, J., Jacobs, B., Crook, C., & Landau, S.	2010	Randomised controlled trial of parent groups for child antisocial behaviour targeting multiple risk factors: the SPOKES project	Both mothers and fathers	5-6 (5.21, SD = 0.30)	5.21	12 week Webster-Stratton (incredible years) programme plus 12 weeks literacy programme plus 6 week revision vs. control group with access to telephone helpline	12	No	Low
Scott, S.	2005	Do parenting programmes for severe child antisocial behaviour work over the longer term, and for whom? One year follow-up of a multi-centre controlled trial	Both mothers and fathers	3-8 (5.34, SD = 1.61)	5.34	Pre- and post-Webster-Stratton Incredible years programme	12	Yes	Low
Sanders, M. R., Ralph, A., Sofronoff, K., Gardiner, P., Thompson, R., Dwyer, S., & Bidwell, K.	2008	Every family: A population approach to reducing behavioural and emotional problems in children making the transition to school	Both mothers and fathers	4-7 (NR)	5.5	5 levels of a Triple P multilevel system of intervention (local mass media, primary care-based	24	Yes	Low

						group, work-place based group, School-based group, seminar series) vs. care as usual			
Patterson, J., Barlow, J., Mockford, C., Klimes, I., Pyper, C., & Stewart-Brown, S.	2002	Improving mental health through parenting programmes: Block randomised controlled trial	Both mothers and fathers	2-8(NR)	5	Webster-Stratton parents and children series group parenting programme vs. no-intervention control	6	No	
Daly, R.M., Holland, C.J., Forrest, P.A.,& Fellbaum, A.G.	1985	Temporal generalization of treatment effects over a three-year period for a parent training program: Directive Parental Counselling (DPC)	Both mothers and fathers	2-13 (6)	6	Pre- and post-Directive parent counselling treatment	36	No	Low
Coughlin, M., Sharry, J., Fitzpatrick, C., Guerin, S., & Drumm, M.	2009	A controlled clinical evaluation of the parents plus children's programme: A video-based programme for parents of children aged 6 to 11 with behavioural and	Both mothers and fathers	6-11 (3.03, SD = 0.5)	3.03	Parents plus child programme vs. treatment as usual	5	No	Low

		developmental problems							
Connolly, L., Sharry, J., & Fitzpatrick, C.	2001	Evaluation of a group treatment programme for parents of children with behavioural disorders	Both mothers and fathers	2-12(NR)	7	Video-based Webster-Stratton parenting intervention vs. this intervention plus child-focused intervention (vs. wait-list control, not included in follow-up)	6	Yes	Moderate
Stewart-Brown, S., Patterson, J., Mockford, C., Barlow, J., Klimes, I., & Pyper, C.	2004	Impact of a general based practise group parenting programme: Quantitative and qualitative results from a controlled trial at 12 months	Both mothers and fathers	2-8 (4.6, SD = 2)	4.6	Webster-Stratton parents and children series group parenting programme vs. no-intervention control	6	No	Low
Drugli, M. B., Larsson, B., Fossum, S., & Mørch, W. T.	2009	Five- to six-year outcome and its prediction for children with ODD/CD treated with parent training	Both mothers and fathers	4-8 (estimated mean 6.6, SD=1.3)	6.6	Incredible years parent training vs. combined parent training and child therapy vs. wait-list control	66	-	Low

Drugli, M. B., Larsson, B., & Clifford, G.	2007	Changes in social competence in young children treated because of conduct problems as viewed by multiple sources	Both mothers and fathers	4-8(6.6, SD = 1.3)	6.6	Incredible years parent training vs. combined parent training and child therapy vs. wait-list control	12	No	High
Drugli, M. B., & Larsson, B.	2006	Children aged 4-8 years treated with parent training and child therapy because of conduct problems: Generalisation effects to day-care and school settings	Both mothers and fathers	4-8 (6.6, SD = 1.3)	6.6	Incredible years parent training vs. combined parent training and child therapy vs. wait-list control	12	No	Moderate
Braet, C., Meerschaert, T., Merledelve, E., Bosmans, G., Van Leeuwen, K., & De Mey, W.	2009	Prevention of antisocial behaviour: Evaluation of an early intervention programme	Both mothers and fathers	4-7 (5.6, SD = 1.1)	5.6	Parent management training vs. wait-list control	12	No	Moderate
Ogden, T., & Hagen, K. A.	2008	Treatment effectiveness of parent management training in Norway: A randomised controlled trial of children with conduct problems	Both mothers and fathers	4-12 (8.44, SD = 2.13)	8.44	Parent management training - The Oregon Model vs. treatment as usual ("regular services")	12	No	Moderate

Webster-Stratton, C., Rinaldi, J., & Jamila, M. R.	2011	Long-term outcomes of Incredible Years parenting program: Predictors of adolescent adjustment	Both mothers and fathers	3-8 (4.9)	4.89	Comparison of post-intervention (Incredible Years parenting programme) outcome measures and those taken at 8-12 year follow-up)	10.25	-	Low
Long, P., Forehand, R., Wierson , M., & Morgan, A.	2004	Does parent-training with noncompliant children have long-term effects?	Mothers	2.3 - 7.8	5.05	14-year follow-up of adolescents whose mothers had completed a parenting programme, with matched community sample	168	Yes	Low
Little, M., Berry, V., Morpeth, L., Blower, S., Axford, N., Taylor, R., Bywater, T., Lehtonen, M., & Tobin, K.	2012	The impact of three evidence-based programmes delivered in public services in Birmingham, UK.	Both mothers and fathers	Incredible years: 3-4 (3.6, SD=0.5), Triple P: 4-9 (6.8, SD=1.8)	3.6 and 6.8	Compared outcomes for two parent-training programmes: Incredible years pre- and post-training vs. control (RCT) and Triple-P pre- and post-training vs. wait-list and	6	No	Moderate

						treatment as usual			
Kjøbli, J., Hukkelberg, S., & Ogden, T.	2013	A randomized trial of group parent training: Reducing child conduct problems in real-world settings	Both mothers and fathers	3-12 (8.56, SD = 2.35)	8.56	Parent management training - The Oregon Model vs. wait-list comparison group	6	No	Moderate
Eckshtain, D., & Gaynor, S.	2013	Combined individual cognitive behaviour therapy and parent training for childhood depression: 2-3 year follow up	Both mothers and fathers	8-13 (10.27 SD=2.02)	10.27	Pre- vs. Post Caregiver-child relationship enhancement training (C-CRET) plus CBT	24-36	Yes	Low
Brock, R.L., Kochanska, G., O'Hara, M.W., Grekin, R. S.	2015	Life satisfaction moderates the effectiveness of play-based parenting intervention in low-income mothers and toddlers	Mothers	2-3.5 (30.3, SD = 5.4)	2.5	Pre-vs. Post play-based intervention vs. play as usual group	6	No	Low

SCHOOL OF PSYCHOLOGY

DOCTORATE IN CLINICAL PSYCHOLOGY

EMPIRICAL PAPER

Modifying Emotion Recognition in Parents Attending Child and Adolescent Mental Health Services

Trainee Name:	**Katherine Donnelly**
Primary Research Supervisor:	**Professor Marcus Munafò** Professor of Biological Psychology, Unversity of Bristol
Secondary Research Supervisor:	**Professor Ian Penton-Voak** Professor of Evolutionary Psychology, University of Bristol
Target Journal:	Journal of Consulting and Clinical Psychology
Word Count:	7763 words (excluding abstract, table of contents, list of figures, references, footnotes, appendices)

Submitted in partial fulfilment of requirements for the Doctorate Degree in Clinical Psychology, University of Exeter

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Abstract

Objectives: This study sought to determine whether a computerised cognitive bias modification programme could be effective within a waiting-room setting for parents accompanying their children to CAMHS appointments. The primary objectives were to determine whether detectable changes to participants' emotion recognition could be observed in this setting, and whether this approach would be acceptable to the population. Secondary measures investigated whether the programme would lead to changes in participants' affect or changes in parents' appraisals of difficulties with children. Methods: A computerised emotion recognition training task was delivered to all participants during four weekly sessions. Participants in the experimental condition (n=17) received feedback aiming to shift their detection of positive facial emotions, while those in the control condition (n=14) received feedback which was not designed to elicit any shift in emotion detection. Results: Positive shifts in emotion recognition were observed in the experimental group, although no changes were observed in secondary measures in either control or experimental groups. Qualitative data indicated that the programme was acceptable and appropriately constructed. Conclusion: This study demonstrates that cognitive bias modification is possible within a waiting-room setting, although the extent to which this can lead to clinically significant improvements in mood or relationships remains uncertain. This work has implications for emotion recognition interventions for clinical populations known to present with negative emotional biases (e.g. anxiety and depression) and represents an important first research step towards developing interventions to improve parent-child relationships.

Keywords: Emotion recognition, cognitive bias modification, parenting intervention.

Child and adolescent mental health (CAMH) problems are common world-wide (Patel, Flisher, Hetrick, & McGorry, 2007). In a UK sample of over 10,000 families, around 10% of children under 15 were found to have a mental health disorder that causes considerable impact on their day-to-day life (Meltzer, Gatward, Goodman & Ford, 1999). Further work indicates a lifetime incidence of around 20% for major depressive disorder in adolescence (Lewinsohn, Rohde, & Seeley, 1998). It appears that mental health problems are often perseverative, perhaps inadequately treated in their initial stages; epidemiological research estimates that around half of all adult mental health problems have their origins in childhood (Belfer, 2008; Jones, 2013; Klasen & Crombag, 2013). Common early psychiatric problems such as behavioural disorders, attention deficit hyperactivity disorder, anxiety and depression have been linked with poor academic functioning and school attendance (DeSocio & Hootman, 2004), drug and alcohol dependence, risk-taking behaviour and criminality (Repetti, et al., 2002) and physical health problems in adult life (Duarte et al., 2010), consequently creating difficulties for children, families and communities.

Links between Child and Parent Mental Health

One childhood group identified to be at increased risk of developing mental health problems is those whose parents have suffered with mental health problems themselves: Meta-analyses suggest that 61% of children whose parents have been diagnosed with major depressive disorder will go on to develop mental health difficulties, and that these children are four times more likely to suffer with affective disorders than their peers, for example (Lavoie & Hodgins, 1994). Given that the prevalence of mental health problems among mothers in urban areas may be as high

as 45% (Stevenson, Simpson & Bailey, 1989; Burt & Stein, 2002), this risk factor is highly prevalent.

Parental depression in particular is understood to correlate significantly with many difficulties among children, including social and academic difficulties, negative attribution style, internalising symptoms and externalising problems (Aunola, Ruusunen, Viljaranta, & Nurmi, 2013; Barker, Copeland, Maughan, Jaffee, & Uher, 2012; Downey & Coyne, 1990). Twin-based studies suggest a genetic influence in the link between child and parent mental health problems (Eaves et al., 1997; Gjone & Stevenson, 1997). However, there is also likely to be a strong environmental effect of living with a depressed parent, suggested by research conducted with children living with a depressed adoptive parent (Tully, Iacono, & McGue, 2008) and high correlations of diagnoses of attention and externalising disorders between non-biological siblings in adoptive families (van den Oord, Boomsma, & Verhulst, 1994). Nevertheless, there remains some room for optimism: Several lines of research have indicated that treatment of depression in mothers leads to commensurate improvement in children's depressive symptoms (Gunlicks & Weissman, 2008; Halligan, Murray, Martins, & Cooper, 2007; Pilowsky et al., 2008; Weissman et al., 2006), suggesting that interventions targeted at parents may be beneficial for children, too.

Development of CAMH Difficulties

The strong link between parent and child mental health would be seen as unsurprising according to systemic clinical models (reviewed by Dallos & Draper, 2010). These emphasise the inter-dependency of family members and the importance of seeing difficulties within families such as mental health problems in light of the impact and meaning that these hold for the group, rather than being

based solely within one individual member. Historically, systemic models were developed in direct opposition to discourses of pathology highlighting individual biology or cognitive belief systems within psychiatry and psychology (Larner, 2003). However, more recent models of the development of child and adolescent mental health problems, such as that of Repetti, Taylor and Seeman (2002) have drawn from cognitive theory to outline the multiple mechanisms by which systemic factors may be at play. Rather down-playing either individual or group-level factors, these authors suggest that 'risky' families that involve cold, unsupportive or neglectful relationships create or interact with existing biological vulnerability, increasing the likelihood of poor psychosocial functioning for offspring (see Figure 1).

The idea of 'risky family social environment' highlighted by Repetti and colleagues (2002) has received considerable attention from other workers in this area. The way in which parents' interactions with children may be affected by their own mental health has been suggested to explain how, besides shared genetic background, parental depressive symptoms may impact on children's levels of distress and their emotional development (Aunola, et al., 2013; Cummings, Keller, & Davies, 2005; Downey, Purdie, & Schaffer-Neitz, 1999; Elgar, Mills, McGrath, Waschbusch, & Brownridge, 2007). Depressive symptoms have been associated with a tendency to withdraw from interactions with others and to attribute hostility to other family members (Conger & Elder, 1994). Researchers have identified lack of interactional warmth as a key factor in the transmission of depressive symptoms from parent to child (Turney, 2011; Wilson & Durbin, 2010). Depressed parents may respond to their children with decreased sensitivity and more negatively than non-depressed parents, for example (Cummings & Davies, 1994; Goodman & Gotlib, 1999; Lovejoy, Graczyk, O'Hare, & Neuman, 2000). Lack of parental affection has been shown to be associated with poor

emotion and behaviour regulation among children (Cummings & Davies, 1994; Elgar, et al., 2007; McLeod, Weisz, & Wood, 2007). These may be mediating factors in the development of psychopathology in the children of depressed parents (e.g., Kane & Garber, 2004; Oyserman, Bybee, & Mowbray, 2002).

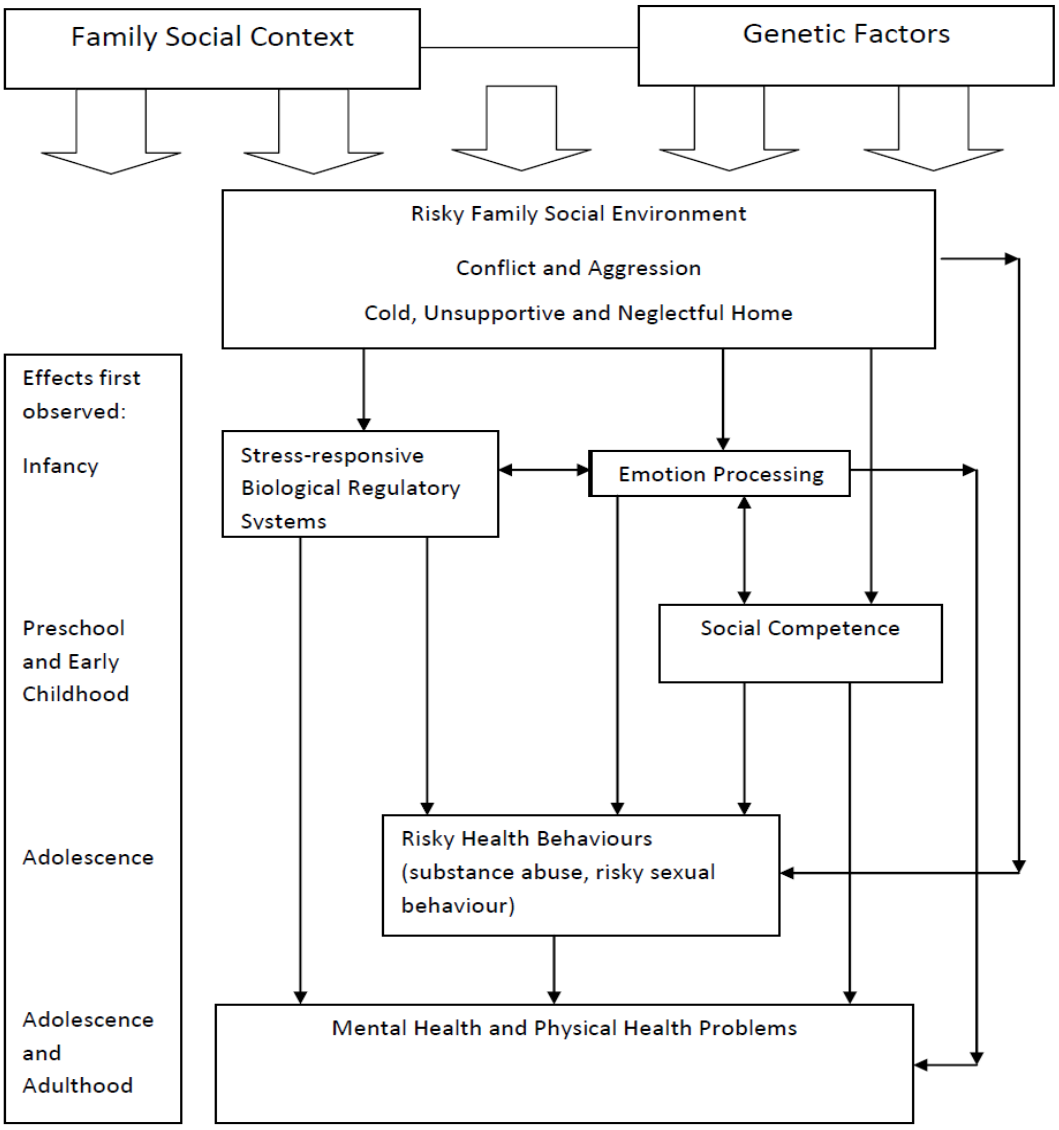


Figure 1. Repetti, Taylor and Seeman's (2002) outline of the systemic factors contributing to children's mental and physical wellbeing (p.331).

These findings are in keeping with what is understood about the importance of attachment in childhood, whereby children use an adult caregiver as a secure base

for exploration and in times of distress. Early developmental theorists such as Bowlby (Bowlby, 1958, 1959, 1960, 1969) and Ainsworth (1963, 1967; Ainsworth, et al., 1978) suggested that a secure attachment to caregivers depended on these adults being consistently sensitive and responsive to their children in social interactions. Responses from caregivers are hypothesised to lead to the development of internal working models, schemas or templates for 'normal' behaviour which guide the developing child's perceptions, emotions, thoughts and expectations in future relationships (Bretherton & Mulholland, 1999). Mary Ainsworth operationalised 'maternal sensitivity' in her 1963 and 1967 papers as being the ability to spontaneously provide a high degree of detail when interviewed about the quality of interactions with children. In contrast, mothers rated low on this sensitivity scale appeared less perceptive of the nuances of these interactions. Maternal sensitivity was found to correlate with children's attachment security, defined as their confidence that their attachment figure will meet their needs (indicated here by behaviours suggesting that they felt safe in the presence of their caregiver and were comfortable exploring their environment, searching for the caregiver when she left the room, and displaying positive affect in her presence.)

These findings led Ainsworth to conclude that the initiation of a secure bond relies on parental sensitivity or the ability to recognise, understand and act appropriately to the child's affective state (Bretherton & Mulholland, 1999). More recent attachment theorists have taken Ainsworth's idea of sensitivity to be key to the formation of secure and stable emotional development in offspring; Gerhardt (2004) writes that 'if caregivers are well attuned to the child, they will be able to acknowledge the child's current emotional state, and symbolise it accurately in words. This allows the child to build up an emotional vocabulary that can identify

feelings accurately and can differentiate between different states.' (p. 51). Gerhardt warns that a lack of attunement can lead to damaging effects for the child's ability to express and negotiate feelings with others, with the result that 'the child's sense of self will also remain rather undifferentiated' (p. 52). Child psychopathology has been linked to insecure attachment patterns, whereas secure attachment patterns predict successful acquisition of social skills, intellectual development and the formation of a social identity which may serve as protective factors for mental health (Berlin, et al., 2008; Pearce & Prezzot-Pearce, 2008). It is easy to see how this important process of developing secure attachments may be adversely affected by responding with decreased sensitivity or increased negativity, as discussed earlier in the context of parents with low mood and depression (Cummings & Davies, 1994; Goodman & Gotlib, 1999; Lovejoy, et al., 2000; Turney, 2011; Wilson & Durbin, 2010).

Current Parenting Interventions

Given widespread recognition of the importance of parental contribution to childhood mental health, CAMHS (child and adolescent mental health service) interventions are unsurprisingly targeted at both children and their wider families. In addition, there is some understanding within mental health services that this relationship is bi-directional, and that the difficulties associated with parenting a child with mental health problems also need to be taken into account when assessing family situations and tailoring interventions accordingly (Angold et al., 1998; Owens et al., 2002). NICE guidelines currently recommend group-based parent-training and education programmes in the management of children with conduct disorders – indeed, individual programmes are only recommended in situations where the family's needs

are considered to be too complex for a group-based programme to be suitable (NICE, 2006).

A key aim of many formalised parenting programmes is to promote attunement (sensitivity to and increased understanding of emotions) among parents, in keeping with the understanding of the importance of this factor for creating and maintaining secure attachment patterns (Dunst & Kassow, 2008; Egeland, et al., 2000). Typical practices include teaching parents observational skills to help them identify their child's affective state. Group facilitators may also aim to enhance parents' understanding of their child's behaviour by explaining salient issues around child development (Doughty, 2007).

Systematic reviews of parent training programmes have reported significant positive long-terms outcomes for children in terms of reduction of problematic conduct (e.g. Barlow, 1999; Lundahl, Risser & Lovejoy, 2006). Further, investigation into impact of parenting programmes on parents' psychological wellbeing has indicated significant associated improvements in parental depression and psychosocial functioning (Barlow, Smailagic, Huband, Roloff & Bennett, 2012; see also, Barlow, Coren & Stewart-Brown, 2002). However, the evidence base of one of the most commonly-used parenting interventions, 'Triple P', has been challenged by a recent systematic review which identified high risk of bias due to authors' invested interest, and a poor overall standard of reporting results (Wilson et al., 2012). Coyne and Kwakkenbos (2013) have discussed the general danger endemic to literature evaluating psychosocial interventions of this kind of basing social policy on studies which are very frequently underpowered, with trials too small to statistically detect effects.

The efficacy of parenting programmes is also threatened by the fact that drop-out rates are notoriously high; estimates range between 27 to 60 per cent (Friars & Mellor, 2009; Gross, Fogg & Tucker, 1995; Forehand, Middlebrook, Rogers & Steffe, 1983). Drop-out rates are higher among mothers reporting high levels of stress, among poorer families and parents from ethnic minorities (Gross, Julion & Fogg, 2001). Further, parents of children who have more severe conduct disorder symptoms and more delinquent behaviour are less likely to complete parenting programmes (Kazdin, 1990, 1997). This may be due in part to the substantial time commitment that parenting programmes require – NICE guidelines recommend between 8 and 12 sessions, with homework between sessions to allow parents to apply what they have learnt to their own family situation (NICE, 2006). Crucially, a recent systematic review (Donnelly, Submitted) indicated that parent-training programmes tend to lead to improvements in children's externalising behaviour and conduct, but do not lead to any significant increase in emotional wellbeing, as indicated by measures of anxiety and depression. This may reflect a need to adapt parenting interventions to include a more effecting attunement training component, as a factor implicated in the development of internalising disorders.

Cognitive Biases in Depression and Anxiety

One aspect which may be missing from current parenting programmes is recognition of typical levels of depression and anxiety among parents, and how associated cognitive biases may colour interactions with offspring (e.g., Aunola, Ruusunen, Viljaranta, & Nurmi, 2013). Many cognitive theories posit that negative cognitive biases, or a tendency to focus on negatively valenced information in one's environment, are key to the onset and maintenance of negative mood states

associated with anxiety and depression (Beck, 1976, 1987, 2008; Beck & Clark, 1997; Clark, Beck, & Alford, 1999; Eysenck, 1997; Mathews & MacLeod, 2005). Clinical and sub-clinical levels of depression, for example, are associated with difficulty disengaging from negative or sad self-relevant stimuli, compounded by attentional avoidance of positive stimuli (Bradley, Mogg, & Lee, 1997; Mathews & MacLeod, 2005). Further, clinically depressed individuals have been shown to demonstrate decreased ability to discriminate between the emotions that others express on their faces (Anderson et al., 2011) and tend to exhibit a bias towards labelling ambiguous faces as negative, missing positive cues of happiness (Gur et al., 1992). The transmission of intergenerational symptoms of depression and anxiety may be related to these cognitive biases (cf. Turney, 2011; Wilson & Durbin, 2010). For example, several authors have suggested that parental modelling of negative or anxious responses to neutral stimuli may influence children to develop similar predispositions, through vicarious learning or direct information transfer (Creswell, Cooper, & Murray, 2010; Goodman & Gotlib, 1999). Further, the essential process of attunement may be disrupted if parents are unable to appropriately acknowledge their child's emotional state, which may adversely affect their child's ability to identify and differentiate their own feelings accurately (Gerhardt, 2004).

It is unclear currently whether cognitive biases are *causal* or *consequential* of depressive symptoms. As discussed by Roiser, Elliot and Sahakian (2012), there are major practical difficulties involved in conducting pre-emptive research capturing data from individuals who are at-risk of developing, but not currently presenting with depressive symptoms. One proposal from Harmer, Goodwin and Cowen (2009), suggests that the efficacy in antidepressant medication may lie in its ability to remediate negative affective biases, which in turn triggers a cycle of gradual changes

in social reinforcement, behaviour and emotional state. By this model, biases become self-fulfilling in that they are seen to lead to a negative stance towards one's environment, perhaps, which in turn elicits negative responses, reinforcing the bias. Harmer and colleagues suggest that bias modification (brought about by antidepressant medication) does not 'directly enhance mood, but may provide a platform for subsequent cognitive and psychological consolidation' (p. 103), which accounts for the lag between neuro-chemical effects of antidepressants and the patient's subjective experience of changes to mood. This has been dubbed a 'virtuous cycle' by Penton-Voak, Bate, Lewis and Munafò (2012), who have reported positive results of emotion perception training using a computer-based bias modification protocol within a non-clinical population reporting high levels of depressive symptoms. The training led to reports of statistically significant increases in positive affect at a two-week follow-up, which the authors suggested may reflect changes in participants' behaviour being reciprocated and reinforced socially. Further investigation is needed to determine whether such an increase would lead to clinically significant change, however. This study reports a first step towards such an investigation.

Cognitive Bias Modification (CBM) as an Intervention for Parents

The present study represents a novel use of a bias modification technique with parents of children who have been referred to CAMHS with a range of emotional and behavioural difficulties. Modification of the perception of ambiguous emotional expressions has been indicated as an effective form of increasing positive mood within non-clinical populations by previous workers (Penton-Voak, et al., 2012). This approach avoids some of the pitfalls of current interventions offered to parents in that it does not demand lengthy commitment or active participation in 'homework'

between sessions. Rather, this study will involve parents who are using CAMHS waiting rooms on a regular basis while their child has an appointment with a CAMHS clinician, seeking to capitalise on the actions that parents are already taking to support their children rather than asking them for any additional commitment. The 'virtuous cycle' mechanism of effect that Penton-Voak and others have suggested (Harmer, et al., 2009) dovetails with current understanding of the importance of parental attunement to children's emotional state for creating and reinforcing secure attachments (e.g., Gerhardt, 2004); if parents are more likely to interpret ambiguous or neutral situations with others as non-threatening, they are more likely to respond in a more positive way, avoiding emotional misalignment with offspring, and theoretically increasing the likelihood of future positive interactions. As such, CBM may be an appropriate intervention for tackling wider systemic issues that may be present, and self-perpetuating, within families of children with mental health difficulties.

However, the CBM protocol followed here has been trialled under laboratory conditions exclusively; the extent to which this would be effective in a community setting (CAMHS waiting rooms) had been previously untested. Rather than daily training in a university setting, participants here were invited to complete the four training sessions that the programme comprises on a basis contingent with their child's appointments with a CAMHS clinician (typically weekly or fortnightly).

Research Aims

As a first step towards a wider clinical trial of this procedure, this work sought to determine whether the modification of parents' appraisals of ambiguous faces would be possible and acceptable within a CAMHS waiting-room setting, with a non-clinical

population. As secondary measures at this stage, the study investigated whether an active modification had beneficial effects on parents' self-reported affect and appraisal of their child's behaviour, in comparison to a control condition. To summarise, the main research questions were:

a) Is cognitive bias modification possible within this setting?
b) Is the protocol that has been adapted from Penton-Voak et al (2012) acceptable for this population?
c) Are there detectable improvements to parents' affect as a result of this training?
d) Are there detectable improvements to parents' appraisals of difficulties with their children as a result of this training?

For clarity, these aims to respond to these questions will be referred to as A, B, C and D respectively for the remainder of this paper.

Method

Design

This study comprised a randomised controlled trial of a four-week programme of emotion recognition training (ERT), for parents of children attending regular CAMHS appointments.

Primary outcome measures.

As this investigation was principally conducted to test the efficacy of the ERT (aim A) the primary outcome measure was the emotion detection threshold on the test phase of the computer-based task. To monitor the suitability of the ERT (aim B), recruitment and retention of participants was monitored, and feedback about their experience of

the study was sought via a semi-structured interview once they had completed all four sessions of the program, as measures of the acceptability of the protocol.

Secondary outcome measures.

Patient Health Questionnaire (PHQ-9; Appendix A).

The 9-item subscale of the Patient Health Questionnaire, known as the PHQ-9 is an instrument for measuring depression, using the 9 criteria upon which diagnosis of DSM—IV depressive disorder is based. This measure is half the length of other depression measures, such as the Beck Depression Inventory (Richter, Werner, Heerlein, Kraus, & Sauer, 1998) yet has been shown to be of comparable sensitivity and specificity (Kroenke, Spitzer, & Williams, 2001). In accordance with aim C of this study, it was used here as a general indicator of parents' mental health.

Strengths and Difficulties Questionnaire (SDQ; Appendix B).

The SDQ (Goodman, 1997) gives an indication of parents' appraisal of their child's behaviour, in accordance with aim D. This questionnaire is used widely across CAMH teams nationally and as such, represents as small a departure as possible from parents' typical CAMHS experience

Materials

Prototypical neutral and happy composite images were generated from 20 individual adult male faces showing a neutral facial expression, and the same 20 individuals showing a happy expression. Original images came from the Karolinska Directed Emotional Face Set (Lundqvist, Flykt, & Öhman, 1998). These prototypical images were used as endpoints to generate a linear morph sequence that consists of images

that change incrementally from unambiguously sad to unambiguously happy, with emotionally ambiguous images in the middle. A sequence with 15 equally spaced images was created for use as experimental stimuli here.

The baseline and test phases each comprised 45 trials, during which participants saw each stimulus from the morph sequence three times. The task required participants to make a forced-choice judgement as to whether the presented face is displaying a ‘sad or ‘happy’ expression. Images were presented one at a time, in random order, for 150 ms. Each stimulus was preceded by a fixation cross, presented for a random period ranging from 1500 to 2500 ms. Subsequent to presentation, a backward mask of noise was presented for 250 ms, which aimed to prevent processing of after-images.

The ERT presented faces along a morph sequence between two polar emotions (happy and sad) in three phases. In the first phase, participants’ judgments of faces as happy or sad were used to determine baseline threshold. In the second phase, similar faces were presented, but feedback was provided (e.g. “correct – that face was happy”, or “incorrect – that face was sad”). The third phase was identical to the first, and was used to identify whether or not the participant’s threshold has changed, relative to the baseline measure. In the ‘active modification’ condition feedback aimed to shift baseline thresholds for detecting one emotion over another (e.g., happiness over sadness) by judging participants’ responses as correct or incorrect based on a threshold two morph steps towards the ‘happy’ end of the continuum than their baseline. That is, a small number of faces previously classified by participants as ‘not happy’ were referred to as ‘happy’ in feedback. Feedback on control conditions was based on baseline performance and as such did not aim to elicit a shift in thresholds (see Figure 2).

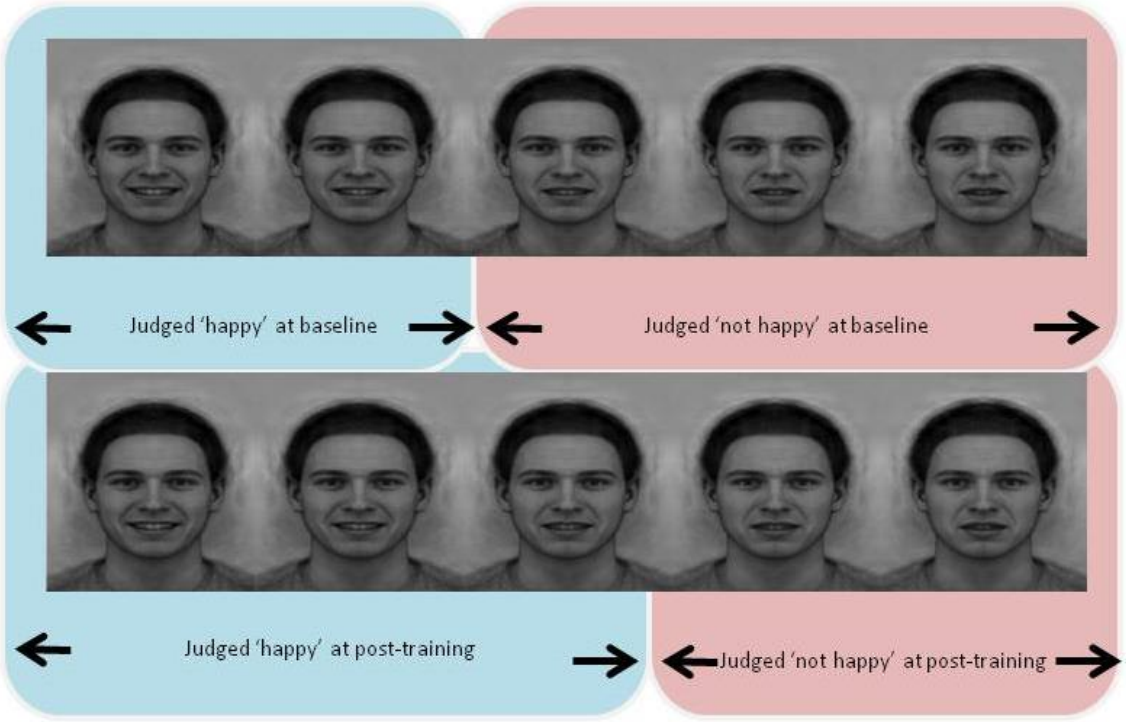


Figure 2: Sample of a face morph sequence on a happy-neutral continuum.

Participants

Participants were forty adults whose children had been referred to CAMHS and who had regular appointments with CAMHS clinicians. A member of the clinical team at each of the three CAMH services involved in the study, who was not directly involved in data collection, identified eligible participants based on the inclusion and exclusion criteria detailed below and on their pre-existing clinical experience of interactions with parents.

Inclusion criteria.

- English as first language or an equivalent level of fluency

- Aged 18 years or over
- Parents of children under 12 years of age

Exclusion criteria.

- Deemed by the clinical team to be unable to complete the task due to personal factors such as mental health issues or drug and alcohol abuse which had been disclosed during routine CAMHS work
- Deemed by the researcher or clinical team to be unable to give informed consent

Power Analyses

The modification condition was designed to induce a two-frame increase in sensitivity of emotion detection along the fifteen-frame morph sequence. That is, the programme aimed to shift participants' thresholds of detection of the target emotion to an extent that corresponded to two images along this morph sequence by adjusting responses according to this modified threshold in the active training condition. Previous work using this task (Penton-Voak, Bate, Lewis & Munafò 2012) has indicated a typical mean sensitivity of eight frames, with a standard deviation of two frames. Thirty participants (fifteen per condition) were required, as this would permit detection of a two frame (i.e., one standard deviation) difference between groups, in order to achieve 80% power at an alpha level of .05. To accommodate potential attrition, forty participants were recruited.

Procedure

Participants identified as eligible by CAMHS clinicians were given an information

sheet (Appendix C) which requested that they provide their details for further contact if they were interested in being involved in the study. These details were passed to the researcher by the clinician, and initial screening contact was organised (either face-to-face or on the telephone). This screening involved providing the participant with an opportunity to ask any questions about the study, checking that they met the eligibility criteria, and organising a schedule of testing sessions in line with their child's CAMHS appointments.

Informed consent.

Upon arrival at the first testing session, participants were given the opportunity to read the information sheet again. The researcher verbally confirmed the schedule of the study session, and reminded them that they could stop the study at any time without having to give a reason, and that this would in no way be held against them and would not affect their own, or their child's clinical care. Participants were given the opportunity to ask any questions again, before giving written informed consent (Appendix D). Participants completed two copies of the consent form, one of which they were given to take away and the other which was filed in the study master file.

Emotion modification.

Participants were randomised by the researcher using a computer-generated randomisation schedule (Wichman & Hill, 1982) to either an active modification procedure designed to promote the perception of happiness in ambiguous emotional expressions, or a control procedure designed to elicit no change in perception of emotional expression (see above). Participants completed computerised modification (or control) procedures repeated four times, scheduled to coincide with their child's

CAMHS appointments. Each session consisted of three phases: baseline, training and test.

Post-session assessments.

At the end of the first and final sessions participants completed the PHQ-9 and SDQ, so that results could be compared pre-, and post-intervention. At the end of the final session, participants were asked to complete the semi-structured interview (Appendix E) privately with the experimenter in a quiet room in the service, rather than in the public waiting room. Participants were given the option of completing this interview over the telephone at a more convenient time, if they would prefer. Responses were recorded verbatim and checked with participants for accuracy prior to analysis.

Analysis

Linear regression was used to conduct the primary analysis; conditions were dummy-coded and used as a predictor of post-training ERT thresholds, with baseline thresholds used as a covariate. Between-group differences were examined (participant age, child age, and total length of time taken to complete the training) so that covariates might be added into the analysis as necessary. Further linear regression was conducted to investigate the relationship between post-training results on secondary, between-subjects factors (PHQ-9 and SDQ) and training condition, adjusted for baseline scores.

Thematic analysis was conducted on interview transcripts as a method of identifying, analysing and reporting themes within participants responses to address research aim B, in accordance with guidelines specified by Braun and Clarke (2006) and Reissman (1993). This analysis firstly involved becoming familiar with the data

by reading and re-reading transcriptions of participants' responses. Initial data-driven codes were generated and cross-checked by an independent observer. Secondly, these codes were grouped into broader themes. These were refined by returning to the original data and checking that the themes accurately depicted the responses that were grouped under each one. They were then labelled and tabulated accordingly.

Research Governance

This protocol was approved by the University of Exeter ethics committee (Appendix F), the proposed NHS site (North Bristol NHS Trust; Appendix G) and an NHS Research Ethics Committee (Appendix H).

Results

Participants

Nine participants discontinued the intervention; six of these had been randomised to the control condition, leaving a sample of 14 for analysis in this arm of the trial and 17 in the active modification arm. This difference across experimental conditions was not statistically significant (X^2 (2, N=40) = 2.14, p = 0.14). Table 1 summarises participant descriptives for each group, and Figure 3 gives full details of participation and attrition throughout the study.

Table 1

Participant descriptives for each treatment modality

	Active Modification	Control
Number of participants aged:		
21-25	2	0
26-30	2	6
31-35	3	6
36-40	7	5
41-45	5	2
Above 45	1	1
Male: Female ratio	0:20	4:16
Mean child age	10.7 (SD 2.9)	10.1 (SD 3.2)

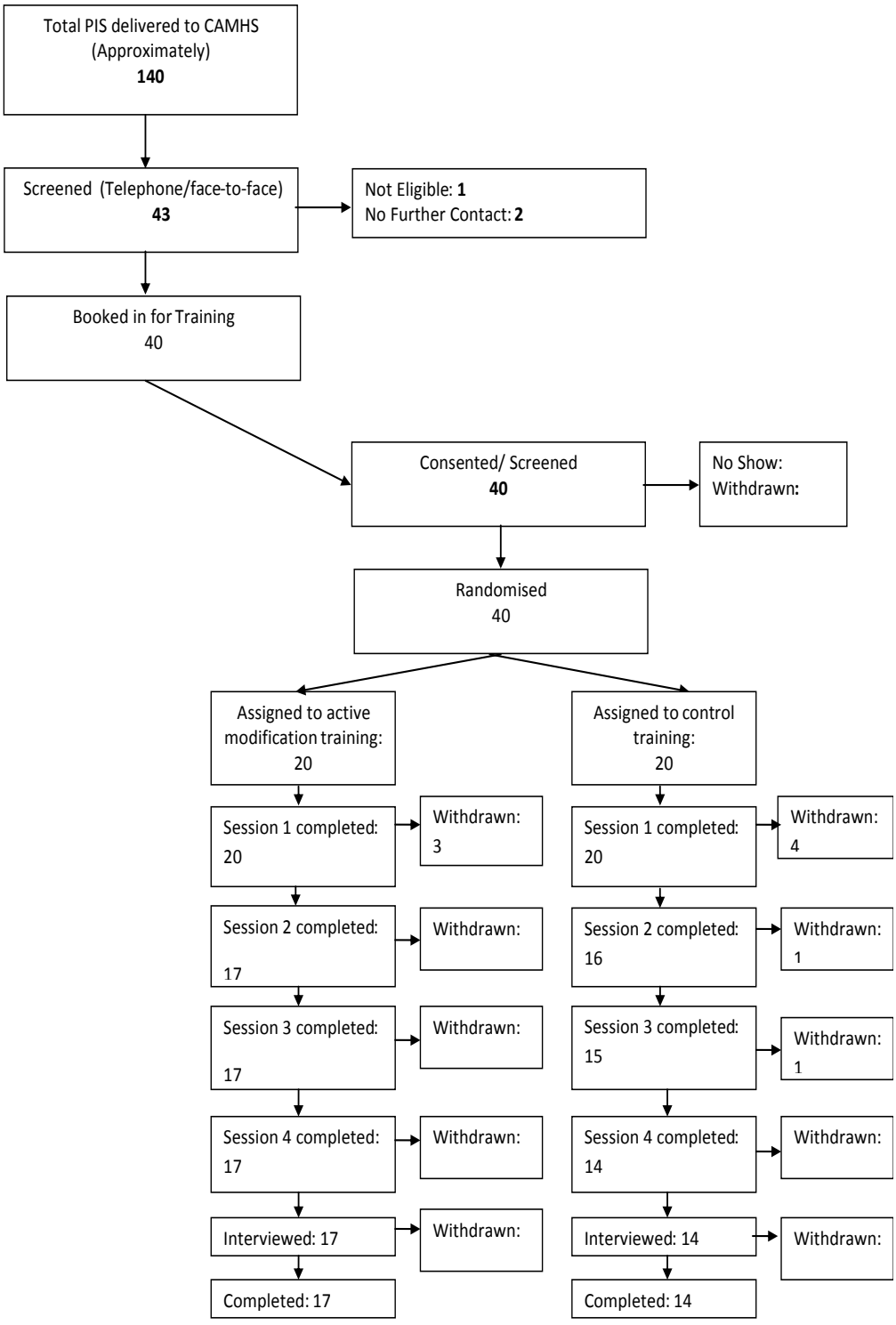


Figure 3. Consort flow diagram

Quantitative Analysis

Analysis by linear regression indicated that training was correlated with a

threshold (number of continuum frames) that was significantly closer to the ‘happy’ end of the continuum among participants in the active modification condition compared with those in the control condition (adjusted mean difference -4.3 , $t(27) = 4.56$, p <.001, 95% CI [6.2,-2.4]). There was no statistical evidence for an effect of participant age ($p = 0.42$), child age ($p = 0.57$) or total time taken to complete the training ($p = 0.83$). Figure 2 demonstrates mean thresholds at each point in the trial for each training condition.

Two participants in the control training condition had answered ‘not happy’ for every face in the final training block, and three participants in the active modification condition had answered ‘happy’ for every face. These data were treated as anomalous and removed from the dataset for further analysis by linear regression. This analysis indicated that participants in the active modification condition responded according to a threshold significantly closer to the ‘happy’ end of the continuum in comparison to participants in the control condition (adjusted mean difference -3.0, $t(22)=4.73$ p <.001, 95% CI [-4.3, -1.6]).

Participants’ baseline SDQ scores were significantly higher than normative SDQ scores for 5- to 15-year-olds published by the Office for National Statistics (Meltzer, Gatward, Goodman, & Ford, 2000) as demonstrated by an unpaired t-test ($t(30) =5.16$, p <.001), indicating that parents were reporting that their children had significantly higher levels of emotion, conduct, attention or relationship difficulties than would be expected in the general population. PHQ-9 scores indicated that participants in both arms of the trial could be classified as having mild depression (Kroenke, et al., 2001). A one-way ANOVA suggested no relationship between either final PHQ-9 ($F(1,28)=.90$, p=.35) or SDQ scores ($F(1,28)=.13$, p= .73) and training condition. Means and standard deviations for primary and secondary analyses are

shown in Table 2.

Table 2

Means for primary and secondary analyses by group

Measure	Active modification	Control
Baseline frame	8 (1)	8 (1)
Post-training frame	12 (2)	9 (3)
Number of days of training	27 (11)	26 (14)
Baseline PHQ-9	4.9 (4.7)	6.6 (5.2)
Final PHQ-9	4.2 (4.6)	6.4 (3.1)
Baseline SDQ	11.1 (4.5)	14.9 (5.7)
Final SDQ	11.9 (4.7)	17.5 (6.1)

Note. Standard deviation is shown in parentheses.

Cohen's effect size for the primary outcome measure *(d* = 1.2), exceeds Cohen's (1988) convention for a 'large' effect (*d* = 0.8), suggesting high practical significance. Mean PHQ-9 score comparisons indicated a small effect size (*d* = 0.2), as did mean SDQ comparisons (*d* = 0.3), although these should be interpreted cautiously in the context of a non-significant *p* value.

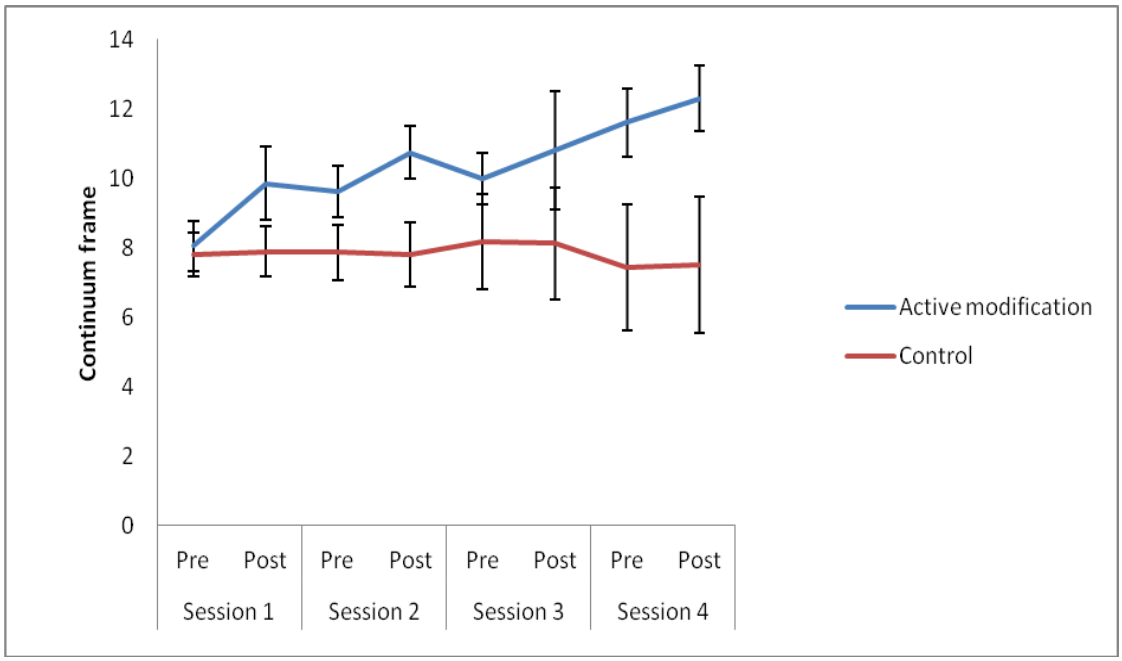


Figure 4. Mean threshold responses across the trial. Error bars indicate one standard deviation

Qualitative Analysis

In accordance with aim B, each participant was invited to take part in a brief, structured interview after completing four sessions of training. All but one participant agreed to take part –one participant declined on the basis that they were unable to spare any extra time beyond the core element of the study (computer task). In all but three cases responses were given over the telephone at a time scheduled to be convenient for the participant; one participant from the control group and two from the active modification group opted to complete the interviews face-to-face in the setting where they had attended training. All interviews took place within 7 days of completing the final training session. In keeping with the scope of the present study and in order to minimise demands on participants, interviews were brief; none lasted longer than ten minutes.

The most commonly reported appraisal of the programme was that it had been ‘fine’ to take part (83%), and that the computer equipment had been suitable for the programme (70%), with 66% of participants commenting that they had enjoyed taking part or had found the programme interesting (Table 3). The single respondent who stated that taking part had not been an enjoyable experience also commented that they had found the programme too long and had been bored by it. Data is reported from participants in both control and experimental groups as there were no apparent differences between the comments from participants in each arm of the trial: Five participants in the experimental arm commented that the programme was too long or boring, and four from the control arm. Two from each condition commented on their lack of trust for the computer classification of facial emotions, and four from each condition mentioned that faces were difficult to distinguish. Coding of all comments was cross-checked by an independent qualitative researcher and concordance was reached in 93.2% of cases.

Table 3

Themes identified in qualitative data

	Proportion endorsing	
Theme	**%**	**(n)**
Suitability of the programme		
Taking part was fine/no problem	83	25
The technology (iPad/computer set-up) was good/suitable	70	21
Taking part was enjoyable/interesting	66	20
The setting was convenient	53	16
The programme took some getting used to, but was then fine	13	4
Adjustments needed		
There were too many faces/the programme was too long/boring	30	9
The faces were difficult to distinguish	25	8

The faces were presented too quickly	20	6
It was difficult to attend on a weekly basis	17	5
I did not trust the computer's classification of faces	13	4
I needed to hold the iPad further away to see it properly	6	2
The programme needed to be adjusted for people with learning difficulties/dyslexia	3	1
External difficulties		
The environment was distracting	23	7
Difficulties due to other child care commitments	17	5
Dislike of the environment made the programme less enjoyable	9	3

Discussion

This work indicated that modification of biases in emotional processing could be elicited via behavioural techniques among parents of children attending CAMHS appointments; participants in the active modification condition classified a greater proportion of ambiguous faces as "happy" after training. This represents a novel use of the CBM technique, and lays the foundation for larger-scale clinical trials in this area. This satisfied the first aim of this project (aim A), which sought to investigate whether cognitive bias modification was possible within this setting. The outcomes of the remaining aims of the project will be discussed in turn.

Acceptability of the Programme

The second key aim of this work (aim B) was to investigate whether a CBM-based protocol would be feasible and acceptable to the target population, within a CAMHS waiting-room setting. The results of this pilot work indicate that the vast majority of participants found the format and requirements of the protocol satisfactory; participants noting difficulties with the programme were in the minority, and the rate of attrition from the study was relatively slight, especially when compared to the 27 to 60 per cent drop-out rates reported with other interventions aimed at this

population (Friars & Mellor, 2009; Gross, Fogg & Tucker, 1995; Forehand, Middlebrook, Rogers & Steffe, 1983).

There was no significant difference between the drop-out rates in the active modification and control groups. Further, qualitative data suggest that non-attendance in a proportion of cases may have been impacted by external factors such as other child care commitments or difficulties attending on a weekly basis, rather than factors intrinsic to the programme. It may be that offering increased flexibility with regards to scheduling study sessions would improve participant retention in future work. Participant attrition in both arms of the trial tended to occur between the first and second sessions, suggesting that a proportion of participants perhaps did not enjoy taking part in the study from the outset, or were not able to commit to this kind of programme for the necessary term. As qualitative data were available only from participants who completed all four session of the study, it is not possible to determine exactly why some participants chose not to continue, although we might speculate that they found the programme too long, boring, challenging or difficult to attend, as these were the negative aspects of the study highlighted by participants who had completed all sessions. Attrition rates in this pilot work provide a realistic estimation of necessary recruitment targets for larger scale clinical trials, and are comparable to those reported in previous multi-session versions of this programme (e.g., Penton-Voak, Thomas, Gage, McMurran, Donald & Munafò, 2013).

Piloting work to gauge acceptability of the basic protocol is an important first step in the process of developing and evaluating interventions, emphasised by Medical Research Council guidance (Craig et al., 2008). The present work has demonstrated empirical support for future work using this computer software, and

has also determined that involving parents in research in CAMHS waiting rooms settings is a viable research approach: Several participants commented positively on the convenience of the study and stated that they had actively enjoyed taking part.

Clinical Implications

To recap, Aims C and D of this project were to investigate whether there were detectable improvements to parents' affect and/or to parents' appraisals of difficulties with their children as a result of this training. Although the present work found evidence for behavioural change in the active modification group, there was no indication that this translated into a noticeable improvement on the clinical measures (PHQ-9 and SDQ) used here. It should be noted that the study was not powered to detect change on these measures, however, and as such this result is perhaps unsurprising. In addition, participants' PHQ-9 scores indicated mild, but sub-clinical, levels of depression; larger-scale studies involving clinical populations would be needed to investigate clinical changes appropriately in future. Alternatively, or additionally, qualitative measures could be adapted to explore participants' perceptions of their mood and interaction with family members pre- and post-intervention – here, a qualitative assessment was made of participants' experiences of the protocol exclusively. Any possible impact their participation had had on their experience of detecting emotions more broadly was not discussed. Suggested adaptations to this study are explored more thoroughly below.

Suggested Adaptations

Single-key responses.

Five participants in total (two in the control training condition) gave the same answer for every face presented in the final training block. Due to the present configuration of the system, participants would have been told that these responses were ‘correct’ throughout the training phase (individual thresholds are based on pre-training responses and as such, highly biased initial responses lead to a commensurate bias in the threshold against which ‘post-training’ responses are compared). As these participants did not seem to be engaging with the task as it was intended, their data were removed for the purposes of final analyses. In future, this can be avoided by adapting the programme software to ensure that it is impossible to register a baseline threshold at either endpoint of the continuum. That way, participants would not be told that their answers were correct every time if they were to press a single key, and would not be encouraged to assume that the programme was simply designed to promote responding as if all faces are happy or not happy exclusively.

Study duration.

Total time taken to complete the study varied widely between participants, with average durations in both arms of the study above the target one-weekly interval between sessions. Participants talked about needing to reschedule sessions around time commitments, which reflects the reality of conducting research in this particular setting, rather than in a laboratory. Although there was no evidence to suggest that variability within study duration impacted on participants’ results, the study was not organised to explore this comprehensively. However, as discussed above, increased flexibility is more likely to prevent participant attrition and as such this may be something to consider addressing in future work.

Several participants commented negatively on the number of faces that they were required to view in the training phase of the study. It may be that shortening this section would increase overall acceptability, but may decrease the effect of CBM training. Conversely, it may be that stronger effects could be elicited by increasing the number of trials; a possibility that requires further investigation in future work. An alternative idea would be to vary the face that is presented between training sessions. This would serve to address participants' complaints about the monotony of the study, and may also help those who found the face currently used in the study particularly hard to 'read'.

Clinical measures.

Limitations of the clinical measures used in the present study are discussed below. The measures used here were chosen as they are used regularly in CAMHS services and have been reported to be acceptable to service-users (Moran, Kelesidi, Guglani, Davidson, & Ford, 2012; Wolpert et al., 2012), so as to deviate from parents' routine experience of attending CAMHS as little as possible. However, alternative measures that specifically address whether a child's behaviour is seen as a problem for the parent might be more suitable here, given that our focus of interest lies in parents' perceptions of children's behaviour, rather than in the facts of their day-to-day actions *per se.* For example, the Eyberg Child Behaviour Inventory (Eyberg & Ross, 1978; Robinson, Eyberg, & Ross, 1980b) asks whether children's conduct in a number of areas is seen as problematic for parents. Frequent poor conduct may trigger significantly higher stress responses for some parents than for others; measures such as the Parenting Stress Index (Abidin, 1995) or Parenting Sense of Competence measure (Johnston & Mash,

1989) which investigate experiences of parenting, rather than focusing on the reality of a child's behaviour, may be useful in future work to assess whether the programme has a significant impact on parents' day-to-day experience.

Objective reports from a third party regarding parent-child interactions may have also been enlightening here, as they have been in previous CBM work in this area. For example, Penton-Voak and colleagues reported independent ratings of aggressive behaviour among young high-risk participants who had undergone training which succeeded in shifting recognition of happiness over anger in ambiguous expressions (Penton-Voak, et al., 2013). Observational measures such as the Dyadic Parent-Child Interaction Coding System (Robinson & Eyberg, 1981) could be employed to assess the quality of parent-child social interaction in a home environment.. A triangulation of qualitative and quantitative data from participants and clinicians working with the family would provide clearer insight into the how the family 'system' responds to this intervention (cf. Brumariu & Kerns, 2010; Repetti, et al., 2002). This is particularly important given the many other constraining factors which may be at play which affect parental attunement towards children, outside of those that CBM is theoretically placed to address. For example, while cognitive biases associated with depression may be barriers to successfully recognising and interpreting children's emotional responses, other deficits such as a lack of mind-mindedness (Fonagy, Steele, Steele, Moran, & Higgitt, 1991; Meins, et al., 2003) may also be at play - that is, a parent's inability to treat their child as a creature with a mind whose feelings drive their behaviour. The consequences of mind-mindedness in terms of parent-child relationships can be seen as wholly separate from any that CBM might effect change on. Equally, other aspects of parenting that have been demonstrated to affect attachment with children, such as parents own

attachment style (van IJzendoorn, 1995), parental control or warmth (Suchman, Rounsaville, DeCoste, Luthar, 2007), may be based on processes which are entirely distinct from the ability to accurately distinguish emotions in others. As such, a more in-depth exploration of parent-child dyadic interactions pre- and post-CBM would have been a better indicator of the extent to which shift in bias impacts at an ecologically valid level. Further trials would benefit from isolating a particular group of parents for whom biases in emotion-recognition could be seen as pivotal to parent-child relations (for example, parents with clinical depression), as this is where CBM is most likely to trigger positive changes.

Limitations

Representativeness of population.

It is difficult to determine how well the present sample of participants represents parents attending CAMHS in the UK as, to our knowledge, relevant statistics have not been published. However, the three CAMH services involved in this study were not highly specialised or involved in other research, which suggests that parents here should not differ significantly from those attending CAMHS in others areas. The majority of participants here were female, which mirrors larger studies targeting this population (e.g., Lindsay et al., 2011). The average age of the children in our sample was within the range that might normally be targeted for UK-wide parenting programmes (e.g., ‘Incredible Years’, Webster-Stratton & Reid, 2002, 2010).

There is, however, a danger that recruitment may have been biased by the involvement of clinicians who essentially hand-picked families recognised as meeting inclusion and exclusion criteria. Families where language barriers would

have prevented parents getting involved, or those felt to be in too stressful or chaotic a situation to be approached were not represented here. Further work would be needed to explore how these families might be approached and included in future work, for example via increased liaison with clinicians and/or translation services.

Clinical measures.

As discussed above, it is unclear whether clinical measures here were unsuited to the task, or whether clinical effects were simply not elicited by the procedure in this format. It may be that the impact of theoretical virtuous cycles (cf. Harmer et al., 2009; Penton-Voak, Bate, Lewis & Munafò, 2012) was simply too subtle to detect using the rather broad-brush psychometrics used in this study. These scales were purposefully chosen as ones which could be completed quickly and with minimal intrusion, in accordance with ethical good practise for a pilot experiment of this kind. However, in following this approach, it may be that fine-grain detail needed to identify any changes in positive mood or interactions with children was lost; laboratory-based studies of this effect have used rather more specific (and arguably more intrusive) measures such as Beck's Depression Inventory (Beck, Steer, & Brown, 1996), for example (e.g., (Adams, Penton-Voak, Harmer, Holmes, & Munafò, 2013).

An alternative approach would have been to use a direct measure of attunement, particularly given the emphasis on this aspect of parenting in attachment literature, and in existing parenting groups (Dunst & Kassow, 2008; Egeland, et al., 2000). A recent publication by Bammens, Adkins and Badger (2015) discusses an innovative method of assessing reflective function, whereby

speech samples of parent of Looked After children were analysed after group training designed to promote reflective capacity. This technique allowed the researchers to conclude that parents' ability to grasp the mental state of others had improved significantly between pre- and post-training. Reflective function is a vital aspect of attunement, perhaps analogous in this context, and future studies would certainly benefit from measuring any change in this capacity.

Equally, however, the programme may have simply failed to trigger any significant change on clinical measures in the present form. Further investigation would be needed to explore if and why this might be the case - as discussed above this work was not configured to identify any impact of the spacing of trial sessions, for example, or look at whether CBM effects were limited to the computer software or would translate onto novel faces, including those of people in 'real life'. There is perhaps a danger here of underestimating the bi-directional nature of the parent-child situation; living with a child with conduct problems may well trigger depressive symptoms in parents, yet this work has been theoretically grounded in the literature discussing the idea that depressive symptoms in parents impacts negatively on the wider family. A lack of clinical effect may reflect the fact that the other side of this dyadic situation is not being sufficiently addressed. It would be interesting to perform a wider investigation to see whether successful work with children in CAMHS can be augmented by introducing this kind of programme for parents, and to explore the relationship between the two complementary approaches.

Qualitative data.

Although some aspects of the study were identified as less satisfactory, participants overall tended to report that they had found taking part in the study 'fine'. It may be

that it was difficult for participants to respond otherwise as they had little to compare the study to – participants were not asked, for example, whether they had taken part in any other parent-focussed interventions or computer-based research of this kind. Further, the fact that interviews were conducted by the researcher may have made it difficult for people to make negative comments about the study – ideally this survey might have been conducted by a third party.

For a more complete picture of parents' experience it would have been useful to have been able to include data from participants who did not complete all four testing sessions. However, it would be important to respects participants' rights to withdraw from the study at any time without having to justify their actions and also to recognise that parents may have withdrawn from CAMHS entirely, not just the research programme. It would be necessary to discuss approaching participants for comment on the study with clinicians so as to avoid complicating the parent-CAMHS relationship in any way. Again, it should be recognised that harder-to-reach participants may have a different view of taking part in this kind of intervention than the families represented here.

Data cleaning.

Data from participants who answered with single-key responses throughout the post-training section of the programme were removed: These appeared to be an artefact of difficulties with the programme as described above, or an indication that participants were not engaging with the programme as was intended. However, this meant that overall fewer participants were involved in the analysis than anticipated, and as such that it may have been underpowered to detect threshold shifts on the CBM task. The fact that a significant shift was detected should be treated with

some caution, as the effect size reported here may be an overestimation of the true effect size in the population as a whole (for discussion see Maxwell, 2004).

Conclusions and Implications

Despite the limitations discussed above, this study remains a useful source of information on which to build further research, and offers ideas for service providers and commissioners with regards to involving parents in interventions of this kind. This has proven to be a successful format for offering a psychological intervention (CBM), and one which may also allow clinicians to discuss awareness of emotional sensitivity without causing parents to feel blamed. While being careful not to overplay the results of pilot work, this study suggests that CBM would be a viable route of investigation when searching for new methods of guiding parents to become increasingly attuned to their children. The longer term benefits of such a method are clear; it is a simple, cost-effective and non-invasive process of intervention which – if successful – would improve the mental health and well-being of both parents and children, fundamentally altering dynamic interactions between the two.

Capitalising on the steps that parents are already taking to support their children works in the best interest of clinicians, researchers and families, and is a method that is currently underused, perhaps for fear of how suitable the waiting room environment might be for this purpose. Greater involvement in research is likely to improve understanding of its use and importance among practitioners and service-users, and would ultimately generate more clinically-relevant outcomes. Further, increased understanding of research within health services is necessary as part of the process of generating an evidence-base for service improvement, in line

with current NHS service development policy (NHS England, 2013). As emphasised throughout this work, this study represents a positive first step in what must be a broader and longer-term process of development and evaluation of this new intervention.

References

Abidin, R. R. (1995). *Parenting Stress Index* (3rd ed.). Florida: Psychological Assessment Resources.

Adams, S., Penton-Voak, I.S., Harmer, C.J., Holmes, E.A., & Munafò, M.R. (2013). Effects of emotion recognition training on mood among individuals with high levels of depressive symptoms: Study protocol for a randomised controlled trial. *Trials*(14), 161-169.

Ainsworth, M.D. (1963). The development of infant-mother interaction among the Ganda. In B. M. Foss (Ed.), *Determinants of infant behavior* (pp. 67-104). New York: Wiley.

Ainsworth, M.D. (1967). *Infancy in Uganda: Infant care and the growth of love*. Baltimore: John Hopkins University Press.

Ainsworth, M.D., Blehar, M., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the strange situation*. Hillsdale NJ: Lawrence Erlbaum Associates.

Anderson, I.M., Shippen, C., Juhasz, G., Chase, D., Thomas, E., Downey, D., . . . Deakin, J. F. W. (2011). State-dependent alteration in face emotion recognition in depression. *The British Journal of Psychiatry, 198*(4), 302-308.

Angold, A. , Messer, S.C., Stangl, D., Farmer, E.M., Costello, E.J., & Burns, B.J. (1998). Perceived parental burden and service use for child and adolescent psychiatric disorders. *American Journal of Public Health January, 88*(1), 75-80.

Aunola, K., Ruusunen, A-K., Viljaranta, J., & Nurmi, J-E. (2013). Parental affection and psychological control as mediators between parents' depressive symptoms and child distress. *Journal of Family Issues*, 1-21.

Bammens, A-S., Adkins, T., & Badger, J. (2015). Psycho-educational intervention increases reflective functioning in foster and adoptive parents. *Adoption and Fostering, 39*(1), 38-50.

Barker, E.D., Copeland, W., Maughan, B., Jaffee, S.R., & Uher, R. (2012). Relative impact of maternal depression and associated risk factors on offspring psychopathology. *British Journal of Psychiatry, 200*(2), 124-129.

Barlow, J. (1999). *Systematic review of the effectiveness of parent-training programmes in improving behaviour problems in children aged 3-10 years*. Health Services Research Unit: University of Oxford.

Barlow, J., Smailagic, N., Huband, N., Roloff, V., & Bennett, C. (2012). Group-based parent training programmes for improving parental psychosocial health. *Cochrane Database of Systematic Reviews, 6*, Art. No.: CD002020.

Beck, A.T. (1976). *Cognitive therapy and the emotional disorders*. New York: New American Library.

Beck, A.T. (1987). Cognitive models of depression. *Jounal of Cognitive Psychotherapy, 1*, 5-38.

Beck, A.T. (2008). The evolution of the cognitive model of depression and its neurobiological correlates. *American Journal of Psychiatry, 165*, 969-977.

Beck, A.T., & Clark, D.A. (1997). An information processing model of anxiety: Automatic and strategic processes. *Behaviour Research and Therapy, 35*, 49-58.

Beck, A.T., Steer, R.A., & Brown, G.K. (1996). *Manual for the Beck Depression Inventory-II*. San Antonio, TX: Psychological Corporation.

Belfer, M. L. (2008). A global perspective on child and adolescent mental health. *International Review of Psychiatry, 20*, 215-216.

Berlin, L.J., Cassidy, J., & Appleyard, K. (2008). The influence of early attachments on other relationships. In J. Cassidy & P.R. Shaver (Eds.), *Handbook of Attachment: Theory, Research and Clinical Applications* (pp. 333-347). New York: Guildford Press.

Bowlby, J. (1958). The nature of the child's tie to his mother. *International Journal of Psycho-Analysis, XXXIX*, 1-23.

Bowlby, J. (1959). Separation anxiety. *International Journal of Psycho-Analysis, XLI*, 1-25.

Bowlby, J. (1960). Grief and mourning in infancy and early childhood. *The Psychoanalytic Study of the Child, VX*, 3-39.

Bowlby, J. (1969). *Attachment. Attachment and Loss* (Vol. 1). London: Hogarth.

Bradley, B. P., Mogg, K., & Lee, S. C. (1997). Attentional biases for negative information in induced and naturally occurring dysphoria. *Behaviour Research and Therapy, 35*, 911-927.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101.

Bretherton, I., & Mulholland, K. A. (1999). Internal working models in attachment relationships: A construct revisited. In J. Cassidy & P.R. Shaver (Eds.), *Handbook of Attachment Theory, Research and Clinical Applications* (pp. 89-114). New York: Guildford Press.

Burt, V.K., & Stein, K. (2002). Epidemiology of depression throughout the female lifecycle. *Journal of Clinical Psychiatry, 63*(7), 9-15.

Clark, D. A., Beck, A. T., & Alford, B. A. (1999). *Scientific foundations of cognitive theory and therapy for depression*. New York: Wiley.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences (2. Auflage)*. Hillsdale, NJ: Erlbaum

Conger, R. D., & Elder, G. H. Jr. (1994). *Families in troubled times: Adapting to change in rural America*. New York: De Gruyter.

Coyne, J.C., & Kwakkenbos, L. (2013). Triple P positive parenting programs: The folly of basing social policy on underpowered flawed studies. *BMC Medicine, 11*, 11.

Craig, P., Dieppe, P., Macintyre, S., Michie, S., Nazareth, I., & Petticrew, M. (2008). Developing and evaluating complex interventions: The new Medical Research Council guidance. [Journal Article]. *British Medical Journal, 337*, 979-983.

Creswell, C., Cooper, P., & Murray, L. (2010). Intergenerational transmission of anxious information processing biases. In J. A. Hadwin & A. P. Field (Eds.), *Information processing biases and anxiety: A developmental perspective*. Oxford: John Wiley & Sons.

Cummings, E.M., & Davies, P. T. (1994). Maternal depression and child development. *Journal of Child Psychology and Psychiatry, 35*, 73-112.

Cummings, E.M., Keller, P.S., & Davies, P.T. (2005). Towards a family process of maternal or paternal depressive symptoms: Exploring multiple relations with child and family functioning. *Journal of Child Psychology and Psychiatry, 46*, 479-489.

DeSocio, J., & Hootman, J. (2004). Children's mental health and school success. *The Journal of School Nursing, 20*(4), 189-196.

Donnelly, K. (Submitted). Parenting intervention outcomes for children's long-term mental health: A systematic review. *Child: Care, Health and Development*.

Doughty, C. (2007). *Effective strategies for promoting attachment between young children and infants*. Christchurch, New Zealand: New Zealand Health Technology Assessment.

Downey, G., & Coyne, J.C. (1990). Children of depressed parents: An integrative review. *Psychological Bulletin, 108*, 50-76.

Downey, G., Purdie, V., & Schaffer-Neitz, R. (1999). Anger transmission from mother to child: A comparison of mothers in chronic pain and well mothers. *Journal of Marriage and the Family, 61*, 62-73.

Duarte, C. S., Sourander, A., Nikolakaros, G., Pihlajamaki, H., Helenius, H., Piha, J., . . . Must, A. (2010). Child mental health problems and obesity in early adulthood. *The Journal of Pediatrics, 156*(1), 93-97.

Dunst, C. J., & Kassow, D. Z. (2008). Caregiver sensitivity, contingent social responsiveness, and secure infant attachment. *Journal of Early and Intensive Behavior Intervention, 5*(1), 40-56.

Eaves, L.J., Silberg, J.L., Meyer, J.M., Maes, H.H., Simonoff, E., Pickles, A., . . . Hewitt, J.K. (1997). Genetics and developmental psychopathology: The main effects of genes and environment on behavioral problems in the Virginia twin study of adolescent behavioral development. *Journal of Child Psychology and Psychiatry, 38*(965-980).

Egeland, B., Weinfield, N. S., Bosquet, M., & Cheng, V. K. (2000). Remembering, repeating, and working through: Lessons from attachment-based

interventions. In J. D. Osofsky & H. E. Fitzgerald (Eds.), *Handbook of infant mental health. Vol. 4: Infant mental health in groups at high risk* (pp. 35–89). New York: Wiley.

Elgar, F. J., Mills, R. S. L., McGrath, P. J., Waschbusch, D. A., & Brownridge, D. A. (2007). Maternal and parental depressive symptoms and child maladjustment: The mediating role of parental behavior. *Journal of Abnormal Child Psychology, 35*, 943-955.

Eyberg, S.M., & Ross, A.W. (1978). Assessment of child behaviour problems: The validation of a new inventory. *Journal of Clinical Child Psychology, 7*(2), 113-116.

Eysenck, M.W. (1997). *Anxiety and cognition: A unified theory*. Hove: Psychology Press.

Fonagy, P., Steele, M., Steele, H., Moran, G.S., & Higgitt, A.C. (1991). The capacity for understanding mental states: The reflective self in parent and child and its significance for security of attachment. Infant Mental Health Journal, 12, 201-218.

Forehand, R., Middlebrook, J., Rogers, T., & Steffe, M. (1983). Dropping out of parent training. *Behaviour Research and Therapy, 21*(6).

Friars, P., & Mellor, D. (2009). Drop-out from parenting training programmes: A retrospective study. *Journal of Child and Adolescent Mental Health, 21*(1), 29-38.

Gerhardt, S. (2004). *Why love matters: how affection shapes a baby's brain*. London: Brunner Routledge.

Gjone, H., & Stevenson, J. (1997). The association between internalizing and externalizing behavior in childhood and early adolescence: Genetic or

environmental common influence? *Journal of Abnormal Child Psychology, 25*(4), 277-286.

Goodman, R. (1997). The Strengths and Difficulties Questionnaire: A research note. *Journal of Child Psychology and Psychiatry, 38*, 581-586.

Goodman, S. H., & Gotlib, I. H. (1999). Risk for psychopathology in the children of depressed mothers: A developmental model for understanding mechanism of transmission. *Psychological Review, 106*, 458-490.

Gross, D., Julion, W., & Fogg, L. (2001). What motivates participation and drop-out among low-income urban families of color in a prevention intervention? *Family Relations, 50*, 246-254.

Gross, L., Fogg, L., & Tucker, S. (1995). The efficacy of parent training for promoting positive parent-toddler relationships. *Research in nursing and health, 18*, 489-499.

Gunlicks, M.L., & Weissman, M.M.C. (2008). Change in child psychopathology with improvement in parental depression: A systematic review. *Journal of the American Academy of Child & Adolescent Psychiatry, 47*, 279-389.

Gur, R.C., Erwin, R.J., Gur, R.E., Zwil, A.S., Heimberg, C., & Kraemer, H.C. (1992). Facial emotion discrimination: II. Behavioral findings in depression. *Psychiatry Research, 42*(3), 241-251.

Halligan, S.L., Murray, L., Martins, C., & Cooper, P.J. (2007). Maternal depression and psychiatric outcomes in adolescent offspring: A 13-year longitudinal study. *Journal of Affective Disorders, 97*(1–3), 145-154.

Harmer, C.J., Goodwin, G.M., & Cowen, P.J. (2009). Why do antidepressants take so long to work? A cognitive neuropsychological model of antidepressant drug action. *The British Journal of Psychiatry, 195*(2), 102-108.

Johnston, C., & Mash, E.J. (1989). A measure of parenting satisfaction and efficacy. *Journal of Clinical Child Psychology, 18*(2), 167-175.

Jones, P.B. (2013). Adult mental health disorders and their age at onset. *British Journal of Psychiatry, 202*, s5 – s10.

Kane, P., & Garber, J. (2004). The relations among depression in fathers, children's psychopathology, and father-child conflict: A meta-analysis. *Clinical Psychology Review, 24*, 399-360.

Kazdin, A. E. (1990). Premature termination from treatment among children referred for antisocial behaviour. *Journal of Child Psychology and Psychiatry, 31*(3), 415-425.

Kazdin, A. E. (1997). Parent management training: Evidence, outcomes and issues. *Journal of the American Academy of Child & Adolescent Psychiatry, 36*(10), 1349-1356.

Klasen, H., & Crombag, A. (2013). What works where? A systematic review of child and adolescent mental health interventions for low and middle income countries. *Social Psychiatry and Psychiatric Epidemiology, 48*, 595-611.

Kroenke, K., Spitzer, R .L., & Williams, J.B.W. (2001). The PHQ-9. Validity of a brief depression severity measure. *Journal of General Internal Medicine, 16*(9), 606-613.

Larner, G. (2003). Integrating family theapy in child and adolescent mental health practice: An ethic of hospitality. *Australian and New Zealand Journal of Family Therapy, 24*(4), 211-219.

Lavoie, R., & Hodgins, S. (1994). Mental disorders among children with one parent with a lifetime diagnosis of major depression. In S. Hodgins, C. Lane, M. Lapalme & et al (Eds.), *A critical review of the literature on children at risk for*

major affective disorders (pp. 37-82). Ottawa, Canada: Strategic Fund for Children's Mental Health.

Lewinsohn, P. M., Rohde, P., & Seeley, J. R. (1998). Major depressive disorder in older adolescents: Prevalence, risk factors, and clinical implications. *Clinical Psychology Review, 18*(7), 765-794. doi: http://dx.doi.org/10.1016/S0272-7358(98)00010-5

Lindsay, G., Strand, S., Cullen, M.A., Cullen, S.M., Band, S., Davis, H., . . . Evans, R. (2011). *Parenting Early Intervention Programme evaluation*. London, UK: Department for Education.

Lovejoy, M.C., Graczyk, P.A., O'Hare, E., & Neuman, G. (2000). Maternal depression and parenting behaviour. *Clinical Psychology Review, 20*, 561-592.

Lundahl, B., Risser, H. J., & Lovejoy, C. (2006). A meta-analysis of parent training: Moderators and follow-up effects. *Clinical Psychology Review, 26*, 86-104.

Lundqvist, D., Flykt, A., & Öhman, A. (1998). *Karolinska Directed Emotional Faces – KDEF*. Stockholm: Karolinska Institute.

Mathews, A., & MacLeod, C. (2005). Cognitive vulnerability to emotional disorders. *Annual Review of Clinical Psychology, 1*, 167-195.

Maxwell, S.E. (2004). The persistence of underpowered studies in psychological research: Causes, consequences and remedies. *Psychological Methods, 9*(2), 147-163.

McLeod, B. D., Weisz, J. R., & Wood, J. J. (2007). Examining the association between parenting and childhood depression: A meta-analysis. . *Clincal Psychology Review*(27), 986-1003.

Meins, E., Fernyhough, C., Wainwright, R., Clark-Carter, D., Das Gupta, M., Fradley, E., & Tuckey, M. (2003). Pathways to understanding mind: Construct validity and predictive validity of maternal mind-mindedness. Child Development, 74(4), 1194-1211.

Meltzer, H., Gatward, R., Goodman, R., & Ford, T. (1999). *The Mental Health of Children and Adolescents in Great Britain*. London: England Office for National Statistics.

Meltzer, H., Gatward, R., Goodman, R., & Ford, T. (2000). *Mental health of children and adolescents in Great Britain*. London, UK: The Stationery Office.

Moran, P., Kelesidi, K., Guglani, S., Davidson, S., & Ford, T. (2012). What do parents and carers think about routine outcome measures and their use? A focus group of CAMHS attenders. *Clinical Child Psychology and Psychiatry, 17*(1), 65-79.

National Institute for Health and Clinical Excellence. (2006). *Parent-training/education programmes in the management of children with conduct disorders*. London, UK: NICE Technology Appraisal Guidance.

NHS England. (2013). Planning and delivering service changes for patients Retrieved 8th October, 2014, from http://www.england.nhs.uk/wp-content/uploads/2013/12/plan-del-serv-chge1.pdf

Owens, P.L., Hoagwood, K., Horwitz, S.M., Leaf, P.J., Poduska, J.M., Kellam, S.G., & Ialongo, N.S. (2002). Barriers to children's mental health services. *Journal of the American Academy of Child & Adolescent Psychiatry, 41*(6), 731-738.

Oyserman, D., Bybee, D., & Mowbray, C. (2002). Influences of maternal mental illness on psychological outcomes for adolescent children. *Journal of Adolescence, 25*, 587-602.

Patel, V., Flisher, A. J., Hetrick, S., & McGorry, P. (2007). Mental health of young people: A global public-health challenge. *The Lancet, 369*(9569), 1302-1313.

Patterson, J., Barlow, J., Mockford, C., Klimes, I., Pyper, C., & Stewart-Brown, S. (2002). Improving mental health through parenting programmes: Block randomised controlled trial. *Archives of Disease in Childhood, 87*, 472-477.

Pearce, J. W., & Prezzot-Pearce, T. D. (2008). *Psychotherapy of abused and neglected children* (2nd ed.). New York: Guildford Press.

Penton-Voak, I.S., Bate, H., Lewis, G., & Munafò, M.R. (2012). Effects of emotion perception training on mood in undergraduate students: Randomised controlled trial. *The British Journal of Psychiatry, 201*, 71-71.

Penton-Voak, I.S., Thomas, J., Gage, S.H., McMurran, M., McDonald, S., & Munafò, M.R. (2013). Inreasing recognition of happiness in ambigous facial expressions reduces anger and aggressive behavior. *Psychological Science, 24*(5), 688-697.

Pilowsky, D.J., Wickramaratne, P., Talati, A., Tang, M., Hughes, C.W., Garber, J., . . . Weissman, M.M. (2008). Children of depressed mothers 1 year after the initiation of maternal treatment: findings from the STAR*D-Child Study. *American Journal of Psychiatry, 165*, 1136-1147.

Repetti, R. L., Taylor, S.E., & Seeman, T. E. (2002). Risky families: Family social environments and the mental and physical health of offspring. *Psychological Bulletin, 128*(2), 330-366.

Richter, P., Werner, J., Heerlein, A., Kraus, A., & Sauer, H. (1998). On the validity of the Beck Depression Interview: A review. *Psychopathology, 31*(3), 160-168.

Riessman, C.K. (1993). *Narrative analysis*. London: Sage.

Robinson, E.A., & Eyberg, S.M. (1981). The dyadic parent-child interaction coding system: Standardisation and validation. *Journal of Consulting and Clinical Psychology, 49*(2), 245-250.

Robinson, E.A., Eyberg, S.M., & Ross, A.W. (1980). The standardization of an inventory of child conduct problem behaviours. *Journal of Clinical Child Psychology, 9*(1), 22-28.

Roiser, J.P., Elliott, R., & Sahakian, B.J. (2012). Cognitive mechanisms of treatment in depression. *Neuropsychopharmacology, 37*(1), 117-136.

Stevenson , J., Simpson, J., & Bailey, V. (1989). The factor structure of the GHQ-30 for mothers with young children. *Journal of Reproductive and Infant Psychology, 7*(1), 39-46.

Suchman, N.E., Rounsaville, B., DeCosta, C., & Luthar, S. (2007). Parental control, parental warmth, and psychosocial adjustment in a sample of substance-abusing mothers and their school-aged and adolescent children. Journal of Substance Abuse Treatment, 32(1), 1-10

Tully, E.C., Iacono, W.G., & McGue, M. (2008). An adoption study of parental depression as an environmental liability for adolescent depression and childhood disruptive disorders. *American Journal of Psychiatry, 165*, 1148-1154.

Turney, K. (2011). Labored love: Examining the link between maternal depression and parenting behaviors. *Social Science Research, 40*, 399-415.

van den Oord, E.J., Boomsma, D.I., & Verhulst, F.C. (1994). A study of problem behaviors in 10- to 15-year-old biologically related and unrelated international adoptees. *Behavioural Genetics, 24*, 193-205.

van IJzendoorn, M. (1995). Adult attachment representations, parental responsiveness, and infant attachment: A meta-analysis on the predictive validity of the Adult Attachment Interview. Psychological Bulletin, 117(3), 387-403.

Weissman, M.M., Pilowsky, D.J., Wickramaratne, P.J., Talati, A., Wisniewski, S.R., Fava, M., . . . Rush, A.J. (2006). Remissions in maternal depression and child psychopathology: A STAR*D-child report. *Journal of the American Medical Association, 295*(1389-1398).

Wichman, B.A., & Hill, I.D. (1982). Algorithm AS 183: An efficient and portable pseudo-random number generator. *Applied Statistics, 31*, 188-190.

Wilson, P., Rush, R., Hussey, S., Puckering, C., Sim, F., Alley, C.S., . . . Gillberg, C. (2012). How evidence-based is an 'evidence-based parenting program'? A PRISMA systematic review and meta-analysis of Triple-P. *BMC Medicine, 10*, 130.

Wilson, S., & Durbin, C.E. (2010). Effects of paternal depression on fathers' parenting behaviours: A meta-analytic review. *Clinical Psychology Review, 30*, 167-180.

Wolpert, M., Ford, T., Trustam, E., Law, D., Deighton, J., Flannery, H., & Fugard, R.J.B. (2012). Patient-reported outcomes in child and adolescent mental health services (CAMHS): Use of ideographic and standardized measures. *Journal of Mental Health, 21*(2), 165-172.

Appendices

Appendix A: PHQ-9

Patient Health Questionnaire—PHQ-9

Name: _____ Date of Birth :_____ Today's Date:_____

Fill in the boxes with pen or pencil to mark your answers.

A. Over the last 2 weeks, how often have you been bothered by any of the following problems?

	Not at all 0	Several days 1	More than half the days 2	Nearly every day 3
1. Little interest or pleasure in doing things	❑	❑	❑	❑
2. Feeling down, depressed, or hopeless	❑	❑	❑	❑
3. Trouble falling/staying asleep, sleeping too much	❑	❑	❑	❑
4. Feeling tired or having little energy	❑	❑	❑	❑
5. Poor appetite or overeating	❑	❑	❑	❑
6. Feeling bad about yourself – or that you are a failure or have let yourself or your family down.	❑	❑	❑	❑
7. Trouble concentrating on things, such as reading the newspaper or watching television.	❑	❑	❑	❑
8. Moving or speaking so slowly that other people could have noticed. Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual.	❑	❑	❑	❑
9. Thoughts that you would be better off dead or of hurting yourself in some way.	❑	❑	❑	❑
Total Score _____ =	_____+	_____+	_____+	_____

B. If you have been bothered by any of the 9 problems listed above, please answer the following:

How difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all	Somewhat Difficult	Very Difficult	Extremely Difficult
❑	❑	❑	❑

Appendix B: SDQ

Strengths and Difficulties Questionnaire

For each item, please mark the box for Not True, Somewhat True or Certainly True. It would help us if you answered all items as best you can even if you are not absolutely certain or the item seems daft! Please give your answers on the basis of the child's behaviour over the last six months or this school year.

	Not True	**Somewhat True**	**Certainly True**
Considerate of other people's feelings	☐	☐	☐
Restless, overactive, cannot stay still for long	☐	☐	☐
Often complains of headaches, stomach-aches or sickness	☐	☐	☐
Shares readily with other children (treats, toys, pencils etc.)	☐	☐	☐
Often has temper tantrums or hot tempers	☐	☐	☐
Rather solitary, tends to play alone	☐	☐	☐
Generally obedient, usually does what adults request	☐	☐	☐
Many worries, often seems worried	☐	☐	☐
Helpful if someone is hurt, upset or feeling ill	☐	☐	☐
Constantly fidgeting or squirming	☐	☐	☐
Has at least one good friend	☐	☐	☐
Often fights with other children or bullies them	☐	☐	☐
Often unhappy, down-hearted or tearful	☐	☐	☐
Generally liked by other children	☐	☐	☐
Easily distracted, concentration wanders	☐	☐	☐
Nervous or clingy in new situations, easily loses confidence	☐	☐	☐
Kind to younger children	☐	☐	☐

	Not True	Somewhat True	Certainly True
Often lies or cheats	☐	☐	☐
Picked on or bullied by other children	☐	☐	☐
Often volunteers to help others (parents, teachers, other children)	☐	☐	☐
Thinks things out before acting	☐	☐	☐
Steals from home, school or elsewhere	☐	☐	☐
Gets on better with adults than with other children	☐	☐	☐
Many fears, easily scared	☐	☐	☐
Sees tasks through to the end, good attention span	☐	☐	☐

Thank you very much for your help

Appendix C: Participant Information Sheet

Participant information sheet

Modifying Emotion Recognition in Parents Attending a Child and Adolescent Mental Health Service

Professor xxxxx, Professor xxxxx, xxxxxx

Before you decide whether or not to take part in this study, please take your time to read this information sheet. Please let us know if you have any questions.

Why is this study being carried out?

We are interested in whether it is possible to train people in emotion recognition. We want to see whether training can help people work out how other people are feeling. We want to know whether it is possible to do this kind of training in a CAMHS waiting room. We are also interested in whether this kind of training makes people feel happier.

Why have I been chosen?

Your child's CAMHS service has agreed to let us carry out this research in their waiting rooms. You have been chosen because you are a parent who might be using a CAMHS waiting room.

What are the requirements to take part?

You are welcome to take part in this study if

- you are aged 18 or over
- you can speak English fluently;
- you are a parent of a child aged 12 or under.

Please note that this study involves using an iPad for up to twenty minutes at each session.

If you are not sure if you are able to take part, please ask the researcher or your CAMHS clinician.

What does the research involve?

At the first session you would have to complete two short questionnaires. These questionnaires ask about your mood and your child's day-to-day behaviour. One of the questionnaires is the same as one you may have already completed at CAMHS. The researcher will be available to answer any questions. They will help you fill in the forms, if you would like.

Next, you would have to complete a computer task on an iPad. This involves looking at faces and deciding what kind of emotion they are showing. You will be told whether your answers are correct or incorrect.

You would be required to attend one session every week for four weeks. All of these sessions will involve the same computer task. The sessions will last a maximum of 50 minutes and will happen at the same time as your child's CAMHS appointment.

After four sessions, the researcher will ask you some questions about what taking part in the study was like. This would take no longer than 20 minutes, and can be done over the phone if you would prefer.

All of your answers will be kept entirely confidentially while the study is taking place. Once the study is complete, this information will be made anonymous. All of your personal details will be deleted and there will be no way of linking you to the answers you give us.

It is up to you to decide whether or not you would like to take part in this study. If you decide to take part, we would ask you to sign a consent form. We will make a copy of this information sheet and a consent form for you to keep. You do not have to give a reason if you decide not to take part, or if you do not want to complete all four sessions. Nobody would be upset and it would not affect the service you receive from CAMHS in any way.

If you are happy to take part we will contact you by phone or email to organise the testing sessions.

Your Data

We won't be able to tell you what your results are individually, because it will not be possible to tell which results are yours when the study is complete. However, we will be able to tell you what the study found overall. You will be able to ask for a copy of the study results once the study is finished. The researcher's contact details are given below.

What are the possible disadvantages and risks of taking part?

Participants in this study will be either given real training or "sham" (pretend) training with half the participants chosen randomly to receive real training and half sham training. This is important so that we can assess the true effect of the training. The researcher will not know which kind of training you were given until after the study is complete. If you are in the "sham training" group, the training you receive will not improve your ability to work out how others are feeling.

You might find some of the questions on the questionnaires upsetting. If this happens, you do not have to answer any of these questions. A researcher will be available to help you if you feel very distressed. She would be able to give you some information about local mental health services which might be able to support you. She may recommend that you talk to your GP if your mood is very low.

There is a chance that you might find the computer training boring! If this happens, you are welcome to take breaks or you can decide not to take part in the study again.

What are the possible benefits of taking part?

You will not be given any reward for taking part in this study – participation is entirely voluntary. However, your information will help us to find out if this training might be useful for parents in the future.

Would my taking part in this study be kept confidential?

Any data taken for this study would remain confidential and would be available only to university research staff and government bodies which monitor whether research studies are performed properly. No-one working at CAMHS will have access to this data.

At the end of the study, your study data will be made anonymous. It would not be possible to identify you from any of the data that we will hold.

What would happen to the results of the research study?

When the study is complete, we will analyse the data we have collected and report the findings. These would be reported in a scientific journal or presented at a scientific meeting. You would not be identified in any way. If you would like a copy of the final paper, you are welcome to ask us for one.

Who is organising and funding the research?

The study is being organised by researchers from Exeter University and the University of Bristol.

Who has reviewed the study?

All research in the NHS is looked at by an independent group of people, called a Research Ethics Committee, to protect your interests. This study has been reviewed and given a favourable opinion by the Frenchay Research Ethics Committee. This study has also been reviewed and approved by the Exeter University Ethics Committee.

Who can I contact for further information?

If you have any questions or would like any more information, please contact members of the study team named below. The easiest way to contact us is by email.

xxxxxxxxx (Researcher)
Department of Clinical Psychology
College of Life and Environmental Sciences
University of Exeter
Exeter
EX4 4QG
Fax: +44 (0)1392 724623
Tel: +44 (0)1392 724611
Email: xxxxx@exeter.ac.uk

Or

Professor xxxxxxx
School of Experimental Psychology
12a Priory Rd
Bristol BS8 1TU
Tel: +44 (0)117 954 6841
Fax: +44 (0)117 928 8588
Email: xxxxxx

What do I do now if I wish to participate in the study?

If you are happy to take part in the study, please complete this reply slip and pass it back to the receptionist at CAMHS. The researcher will then contact you and arrange to meet you when you are next at CAMHS.

Name:.....

Telephone number or contact email address:.....

I agree that I am happy for the researcher to contact me using the details that I have provided above

....(please sign)

Appendix D: Consent form

School of Experimental Psychology
Tel: XXXXX
XXXXX, XXXX@exeter.ac.uk

REC number: XXXXXX

Patient Identification Number for this trial:

CONSENT FORM

Title of Project: **Modifying Emotion Recognition in Parents Attending Child and Adolescent Services**

Name of Researcher: **XXXXXXXX**

Please initial all boxes

1. I confirm that I have read and understand the information sheet dated 10th May 2013 (version 5) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐
2.
3. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my own, or my child's, medical care or legal rights being affected. ☐
4. I confirm that I am over 18 years of age ☐
5. I understand that data collected during the study, may be looked at by academic supervisors from the University of Bristol, the University of Exeter, from regulatory authorities or from the NHS Trust, where it is relevant to my taking part in this research. I give permission for these individuals to have access to my data. ☐
6. I agree to take part in the above study. ☐

Name of Participant	Date	Signature
Name of Person taking consent.	Date	Signature

Appendix E: Interview Schedule

1) Did you enjoy taking part in this study? Why/why not?

2) Was the programme easier or more difficult than you expected? Why was this?
   Prompts: What aspects of the programme did you find difficult/easy?

3) Did you think that the iPad was a suitable way to view the programme?
   Prompts: Did you find the iPad easy to use? Did you have any difficulties using it?

4) How did you feel about doing the study while your child was having their appointment?
   Prompts: Was that arrangement convenient for you? Did you have any concerns about taking part in the study while your child was having their appointment?

5) Was the location of the study suitable for you?
   Prompts: Was there anything that you would have liked to change about the location of the study?

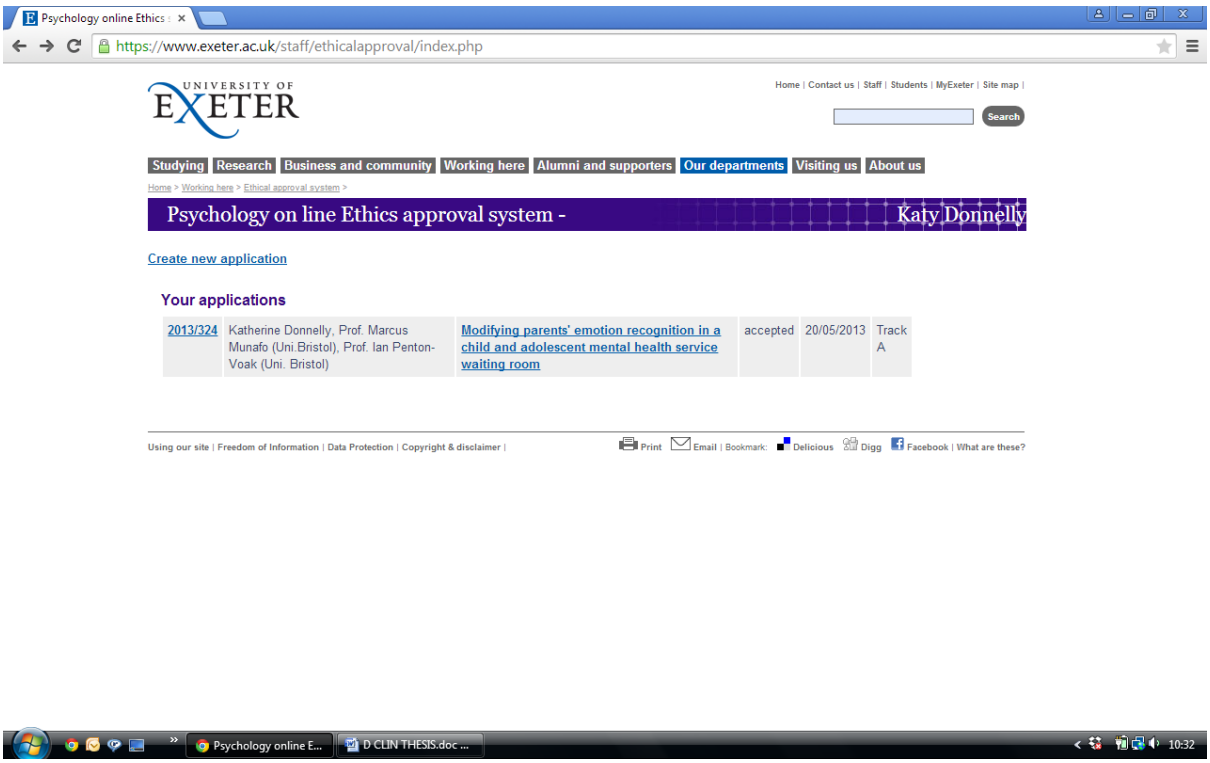
6) Was the length of the programme suitable for you?
   Was the programme longer or shorter than you would have liked? Did you have any difficulty keeping your attention focused on it for the whole time?

7) How did you feel about doing the study every week for four weeks?
   Was the study longer or shorter than you would have liked? Did you have any difficulty attending every week?

8) Would you recommend the study to others? Why/why not?

9) Do you have any further comments/questions?

Appendix F: University of Exeter Ethics Approval



Appendix G: Research and Development Site Approval

Title: Modifying Emotion Recognition in Parents Attending a Child and Adolescent Mental Health Service
CI: Dr Katherine Donnelly
IRAS number: 118704
REC number: 13/SW/0033
R&D Reference: 3090
Start Date: 26.06.13
End Date: 01.08.14

I am pleased to confirm North Bristol NHS Trust (NBT) NHS permission for the above study.

FULL R&D APPROVAL

You have permission to begin recruitment

I understand that University of Exeter will act as sponsor for this study.

Permission is based on the NHS REC favourable opinion given on 15.05.13.

If your study is an interventional clinical trial, there is a new target to enter your first patient into the study within 70 days of submitting a full & valid R&I application. Please notify us of the date of the first patient first visit. If you experience any problems recruiting, please contact the R&I office for advice and support.

We wish you every success with your study. We are keen to support good research at North Bristol NHS Trust and are pleased that you have decided to conduct your project here.

The lead Research Governance Officer for this study is Annette Clarke, who will remain your ongoing main point of contact. They can be reached at the following email address: research@nbt.nhs.uk .

Approval is given on the understanding that this project be carried out according to Good Clinical Practice and UK Statutory Instrument, and within the guidelines of the NHS Research Governance Framework for Health and Social Care, and NHS Trust policies, procedures, and SOPs which are available online athttp://www.nbt.nhs.uk/research.

In particular you have responsibility for:

- Ensuring that, all participants sign informed consent (whenever applicable)
- Adhering to the protocol as agreed by the Research Ethics Committee and ensuring your co-workers do the same.
- Adhering to National Research Ethics Service and other applicable regulatory (e.g. MHRA) reporting requirements.
- Ensuring all recruitment figures are uploaded to the Edge database on a weekly basis.
- Providing us with information about any amendments to the protocol, changes in funding, personnel or end date. Amendments should be submitted in accordance with guidance in IRAS.
- Informing us of any research-related adverse events.

- Ensuring that any staff working on this study at this site have been issued with a contract with NBT (honorary, substantive or bank) or a letter of access before they commence work on the study at this site.
- Maintenance of an Investigator Site File and/or Trial Master Files*

Researchers who hold substantive or honorary contracts with North Bristol NHS Trust (NBT) will be covered against claims of negligence by patients of NBT under the Clinical Negligence Scheme for Trusts (CNST). This scheme does not cover 'no fault' compensation and the Trust is precluded from taking out separate insurance to cover this. Any patient or volunteer taking part in the study is entitled to know that if they suffered injury as a result of participating in the study they would first have to prove negligence in a court of law before they could gain compensation. If the study involves patients of any other Trust or healthcare organisation, you will need to confirm the indemnity arrangements with that organisation.

In addition, other information may be requested from time to time and lay summary of the results will be requested from you at the end of the study.

This full R&D approval document will need to be filed in your Investigator Site File and/or Trial Master Files.

In accordance with the NBT Research Monitoring and Audit policy, this study is subject to audit by the R&I Office. We will contact the Principal Investigator to make appropriate arrangements for this.

Many thanks

Nicola Williams
Deputy Director
Research & Innovation
North Bristol NHS Trust

Tel: 0117 323 6468
Fax: 0117 323 6192
http://www.nbt.nhs.uk/research

Appendix H: NRES Committee Ethics Approval

Health Research Authority
NRES Committee South West - Frenchay
Bristol Research Ethics Committee Centre
Level 3, Block B
Whitefriars
Lewins Mead,
Bristol
BS1 2NT

Telephone: 01173421334
Facsimile: 01173420445

15 May 2013

Dr Katherine Donnelly
Trainee clinical psychologist
Taunton and Somerset NHS Trust
Department of Clinical Psychology
University of Exeter
Exeter
EX4 4QG

Dear Dr Donnelly

Study title:	**Modifying Emotion Recognition in Parents Attending a Child and Adolescent Mental Health Service**
REC reference:	**13/SW/0033**
IRAS project ID:	**118704**

Thank you for your letter of 17 April 2013, responding to the Committee's request for further information on the above research and submitting revised documentation.

The further information has been considered on behalf of the Committee by the Chair.

We plan to publish your research summary wording for the above study on the NRES website, together with your contact details, unless you expressly withhold permission to do so. Publication will be no earlier than three months from the date of this favourable opinion letter. Should you wish to provide a substitute contact point, require further information, or wish to withhold permission to publish, please contact the Co-ordinator Miss Christine Hobson, nrescommittee.southwest-frenchay@nhs.net.

Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised, subject to the conditions specified below.

Ethical review of research sites

NHS sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

Non-NHS sites

Conditions of the favourable opinion

The favourable opinion is subject to the following conditions being met prior to the start of the study.

Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.

Management permission ("R&D approval") should be sought from all NHS organisations involved in the study in accordance with NHS research governance arrangements.

Guidance on applying for NHS permission for research is available in the Integrated Research Application System or at http://www.rdforum.nhs.uk.

Where a NHS organisation's role in the study is limited to identifying and referring potential participants to research sites ("participant identification centre"), guidance should be sought from the R&D office on the information it requires to give permission for this activity.

For non-NHS sites, site management permission should be obtained in accordance with the procedures of the relevant host organisation.

Sponsors are not required to notify the Committee of approvals from host organisations

It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

Document	*Version*	*Date*
Covering Letter		17 January 2013
Covering Letter		18 March 2013
Covering Letter		28 March 2013
Evidence of insurance or indemnity		01 August 2012
Interview Schedules/Topic Guides	1	09 January 2013
Investigator CV		
Letter from Sponsor		19 December 2012
Other: Supervisor Marcus Munafo's CV		

Other: Consort Flow Diagram	2	01 March 2013
Participant Consent Form	4	28 March 2013
Participant Information Sheet	5	10 May 2013
Protocol	4	
Questionnaire: Validated - SQD		
Questionnaire: Parent-Child Relationship Scale	1	09 January 2013
Questionnaire: PHQ - 9	1	01 March 2013
REC application		20 December 2012
Response to Request for Further Information		18 March 2013
Response to Request for Further Information		17 April 2013
Summary/Synopsis	1	09 January 2013

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

After ethical review

Reporting requirements

The attached document *"After ethical review – guidance for researchers"* gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Adding new sites and investigators
- Notification of serious breaches of the protocol
- Progress and safety reports
- Notifying the end of the study

The NRES website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

Feedback

You are invited to give your view of the service that you have received from the National Research Ethics Service and the application procedure. If you wish to make your views known please use the feedback form available on the website.

Further information is available at National Research Ethics Service website > After Review

13/SW/0033	**Please quote this number on all correspondence**

We are pleased to welcome researchers and R & D staff at our NRES committee members' training days – see details at http://www.hra.nhs.uk/hra-training/

With the Committee's best wishes for the success of this project.

Yours sincerely

Dr Robert Beetham
Chair

Email:nrescommittee.southwest-frenchay@nhs.net

Enclosures: "After ethical review – guidance for researchers"

Copy to: *Michael Wykes, Univerity of Exeter*
Ms Gemma Oakes, North Bristol NHS Trust

Appendix I: Dissemination Statement

The results of this study will be disseminated to interested parties through feedback, journal publication and presentation.

Dissemination to participants and NHS services.

Participants will not be given individual feedback, but a poster displaying group means and a summary of outcomes will be displayed in the waiting rooms of the services where the research took place, with contact details provided should individuals have any further enquiries. The NHS research ethics committee at Exeter and RD&E Research and Development team will be sent a summary of the findings of the study and will be informed that the study is now complete.

Journal Publication

This work represented a first step in what is intended to be a broader research programme, and will be included in future journal publications alongside the results of more extensive trials. I am hoping to secure a clinical fellowship to pursue this work further, and will report the results of this trial in fellowship applications as work that will inform future projects.

Presentation

In June 2015 my research findings were presented to an academic audience, for peer review, as part of the Doctorate in Clinical Psychology at the University of Exeter.

Appendix J: Instructions for Authors from Journal of Consulting and Clinical Psychology

Title of Manuscript

The title of a manuscript should be accurate, fully explanatory, and preferably no longer then 12 words. The title should reflect the content and population studied (e.g., "treatment of generalized anxiety disorders in adults"). If the paper reports a randomized clinical trial (RCT), this should be indicated in the title. Note that JARS criteria must be used for reporting purposes.

Abstract

All manuscripts must include an abstract containing a maximum of 250 words typed on a separate page. After the abstract, please supply up to five keywords or brief phrases.
Manuscripts published in the *Journal of Consulting and Clinical Psychology* will include a structured abstract of up to 250 words.
For studies that report randomized clinical trials or meta-analyses, the abstract also must be consistent with the guidelines set forth by JARS or MARS (Meta-Analysis Reporting Standards) guidelines, respectively. Thus, in preparing a manuscript, please ensure that it is consistent with the guidelines stated below.
Please include an Abstract of up to 250 words, presented in paragraph form. The Abstract should be typed on a separate page (page 2 of the manuscript), and must include each of the following sections:

- **Objective:** A brief statement of the purpose of the study
- **Method:** A detailed summary of the participants (N, age, gender, ethnicity) as well as descriptions of the study design, measures (including names of measures), and procedures
- **Results:** A detailed summary of the primary findings that clearly articulate comparison groups (if relevant), and that indicate significance or confidence intervals for the main findings
- **Conclusions:** A description of the research and clinical implications of the findings

Public Health Significance Statements

Authors submitting manuscripts to the *Journal of Consulting and Clinical Psychology* are required to provide 2–3 brief sentences regarding the public health significance of the study or meta-analysis described in their paper. It should be written in language that is easily understood by both professionals and members of the lay public. Examples are included below. This description should be included within the manuscript on the abstract/keywords page.
When an accepted paper is published, these sentences will be boxed beneath the abstract for easy accessibility. All such descriptions will also be published in the back of each issue, as well as on the journal's web page. This new policy is in keeping with efforts to increase dissemination and usage by larger and diverse audiences.
Examples of these 2–3 sentences include the following:
"This study strongly suggests that (description of a given psychosocial treatment) is an effective treatment for anxiety, but only if it is of mild to moderate severity. For persons with severe anxiety, additional treatments may be necessary."
"When treating individuals of (name of a particular ethnic minority group) who are experiencing PTSD, this study demonstrated the importance of taking into account cultural factors, especially those that involve one's spiritual beliefs."
"This study highlights the importance of directly including one's family in treatment when helping adults diagnosed with cancer overcome their depression."

Keywords

Please supply up to five keywords or short phrases.

Participants: Description and Informed Consent

The Method section of each empirical report must contain a detailed description of the study participants, including (but not limited to) the following: age, gender, ethnicity, SES, clinical diagnoses and comorbidities (as appropriate), and any other relevant demographics.

In the Discussion section of the manuscript, authors should discuss the diversity of their study samples and the generalizability of their findings.
The Method section also must include a statement describing how informed consent was obtained from the participants (or their parents/guardians) and indicate that the study was conducted in compliance with an appropriate Internal Review Board.

Measures

The Method section of empirical reports must contain a sufficiently detailed description of the measures used so that the reader understands the item content, scoring procedures, and total scores or subscales. Evidence of reliability and validity with similar populations should be provided.

Statistical Reporting of Clinical Significance

JCCP requires the statistical reporting of measures that convey clinical significance. Authors should report means and standard deviations for all continuous study variables and the effect sizes for the primary study findings. (If effect sizes are not available for a particular test, authors should convey this in their cover letter at the time of submission.)
JCCP also requires authors to report confidence intervals for any effect sizes involving principal outcomes (see Fidler et al., *Journal of Consulting and Clinical Psychology*, 2005, pp. 136–143 and Odgaard & Fowler, *Journal of Consulting and Clinical Psychology*, 2010, pp.287–297).
In addition, when reporting the results of interventions, authors should include indicators of clinically significant change. Authors may use one of several approaches that have been recommended for capturing clinical significance, including (but not limited to) the reliable change index (i.e., whether the amount of change displayed by a treated individual is large enough to be meaningful; see Jacobson et al., *Journal of Consulting and Clinical Psychology*, 1999), the extent to which dysfunctional individuals show movement into the functional distribution (see Jacobson & Truax, *Journal of Consulting and Clinical Psychology*, 1991), or other normative comparisons (see Kendall et al., *Journal of Consulting and Clinical Psychology*, 1999).
The special section of *JCCP* on "Clinical Significance" (*Journal of Consulting and Clinical Psychology*, 1999, pp. 283–339) contains detailed discussions of clinical significance and its measurement and should be a useful resource (see also Atkins et al., *Journal of Consulting and Clinical Psychology*, 2005, pp. 982–989).

Discussion of Clinical Implications

Articles must include a discussion of the clinical implications of the study findings or analytic review. The Discussion section should contain a clear statement of the extent of clinical application of the current assessment, prevention, or treatment methods. The extent of application to clinical practice may range from suggestions that the data are too preliminary to support widespread dissemination to descriptions of existing manuals available from the authors or archived materials that would allow full implementation at present.

Randomized Clinical Trials: Use of JARS Guidelines

JCCP requires the use of JARS guidelines for randomized clinical trials, consistent with the recommendations and policies established by the Publications and Communications Board of the American Psychological Association. JARS offers a standard way to improve the quality of such reports, and to ensure that readers have the information necessary to evaluate the quality of a clinical trial.
Manuscripts that report randomized clinical trials are required to include a flow diagram of the progress through the phases of the trial. When a study is not fully consistent with JARS guidelines, the limitations should be acknowledged and discussed in the text of the manuscript.
For follow-up studies of previously published clinical trials, authors should submit a flow diagram of the progress through the phases of the trial and follow-up. The above checklist information should be completed to the extent possible, especially for the Results and Discussion sections of the manuscript.
Authors of RCTs should also describe procedures to assess for treatment fidelity (also known as treatment integrity), including both therapist adherence and competence. Where possible, results should be reported regarding the relationship between fidelity and outcome found in the investigation.

- View the JARS guidelines (PDF, 98KB)

Meta-Analyses of Randomized Clinical Trials: Use of MARS Guidelines

JCCP requires the use of the APA MARS guidelines for meta-analyses of randomized clinical trials. MARS offers a standard way to improve the quality of such reports, and to ensure that readers have the information necessary to evaluate the quality of a meta-analysis.
Manuscripts that report meta-analyses of randomized clinical trials are required to include a flow diagram of the progress through the stages of the meta-analysis. When a study is not fully consistent with MARS, the limitations should be acknowledged and discussed in the text of the manuscript.
MARS guidelines are included in the JARS guidelines (PDF, 98KB)

Nonrandomized Trials

For nonrandomized designs that often are used in public health and mental-health interventions, *JCCP* requires compliance with JARS.
Failure to comply with JARS or MARS can result in the return of manuscripts without review.

Manuscript Preparation

Prepare manuscripts according to the *Publication Manual of the American Psychological Association* (6th edition).
Manuscripts may be copyedited for bias-free language (see Chapter 3 of the *Publication Manual*).
Review APA's Checklist for Manuscript Submission before submitting your article.
Double-space all copy. Other formatting instructions, as well as instructions on preparing tables, figures, references, metrics, and abstracts, appear in the *Manual*.
Below are additional instructions regarding the preparation of display equations, computer code, and tables.

References

List references in alphabetical order. Each listed reference should be cited in text, and each text citation should be listed in the References section.

Length and Style of Manuscripts

Full-length manuscripts should not exceed 35 pages total (including cover page, abstract, text, references, tables, and figures), with margins of at least 1 inch on all sides and a standard font (e.g., Times New Roman) of 12 points (no smaller). The entire paper (text, references, tables, etc.) must be double spaced.
Instructions on preparing tables, figures, references, metrics, and abstracts appear in the *Publication Manual of the American Psychological Association* (6th edition).
Authors submitting manuscripts that report new data collection, especially randomized clinical trials (RCTs), should comply with the newly developed APA Journal Article Reporting Standards (PDF, 98KB) (JARS; see *American Psychologist*, 2008, *63*, 839–851 or Appendix in the *APA Publication Manual*).
For papers that exceed 35 pages, authors must justify the extended length in their cover letter (e.g., reporting of multiple studies), and in no case should the paper exceed 45 pages total. Papers that do not conform to these guidelines may be returned without review.

The References section should immediately follow a page break.